

**KNOWLEDGE AND ATTITUDE ON  
NO-SCALPEL VASECTOMY AMONG THE TEACHERS AT  
GOVERNMENT HIGHER SECONDARY SCHOOLS IN CHENNAI**

**By  
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**A DISSERTATION SUBMITTED TO THE TAMIL NADU DR. M.G.R MEDICAL  
UNIVERSITY, CHENNAI, IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR DEGREE OF MASTER OF  
SCIENCE IN NURSING**

**APRIL 2012**

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## **DECLARATION**

I hereby declare that the present dissertation entitled **“KNOWLEDGE AND ATTITUDE ON NO-SCALPEL VASECTOMY AMONG THE TEACHERS AT GOVERNMENT HIGHER SECONDARY SCHOOLS IN CHENNAI”** is the outcome of the original research work undertaken and carried out by me, under the guidance of Prof. S. Ani Grace Kalaimathi M.Sc. (N)., PGDNA., DQA., Ph.D. Principal and Prof. S. Kanakambujam, M.Sc., M.Phil. Head of the Department, Community Health Nursing, MIOT College of Nursing, Chennai. I also declare that the material of this has not found in any way, the basis for the award of any degree or diploma in this university or other universities.

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II Year M.Sc. (N).

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## **ABSTRACT**

A study to assess the knowledge and attitude on No-Scalpel Vasectomy among the teachers at selected Government Higher Secondary Schools in Chennai. A conceptual framework of the study was developed on the basis of Modified Leninger's Culture Care Diversity Model. A quantitative research approach with descriptive design was used to achieve the objectives of the study. Non-probability convenient sampling technique was adopted with a sample size of 100 school teachers.

The demographic characteristics revealed that 32% (32) of the school teachers belonged to the age group of 31–40 years, 55% (55) of them were from the joint families, 63% (63) of them belonged to the Hindu religion and 83% (83) of the them were postgraduates. The table also reveals that 69% (69) of the school teachers underwent Master in Education training, 68% (68) of them had a monthly income of >Rs.15,000, 55% (55) of them had two children, 83% (83) of them did not adopt to Vasectomy, 56% (56) of them were not aware of No-Scalpel Vasectomy and 52% (52) of them did not adopt to any method of family planning. 21% (21) of them had moderately adequate knowledge, 77% (77) of them had inadequate knowledge and 50% (50) of them had favourable attitude, 42% (42) of them had unfavourable attitude on No-Scalpel Vasectomy among the teachers. It revealed that positive correlation existed between knowledge and attitude on No-Scalpel Vasectomy among the teachers. The correlation was found statistically significant at the level of  $p < 0.05$ . Hence, as the level of knowledge decreases the level of attitude also were unfavorable. It was also noted that there was significant association between levels of knowledge with religion at the level of  $p < 0.05$ . There was no significant association

between level of knowledge with age, type of family, educational status, training, family/friends adopted Vasectomy outcome, aware of No-Scalpel Vasectomy about sources and adopted method of family planning at the level of  $p>0.05$ . It was also noted that there was a significant association between attitude with demographic variables like monthly income which is significant at the level of  $p<0.01$  level. There was also a significant association between attitude and demographic variables like age and aware of No-Scalpel Vasectomy which is significant at the level of  $p<0.05$ . There was no significant association between attitude with demographic variables like type of family, educational status, training, family/friends adopted vasectomy outcome and adopted method of family planning at the level of  $p>0.05$   $p>0.01$ .

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# **CHAPTER – I**

## **INTRODUCTION**

**“God gives as grace to accept with serenity the things cannot be changed,  
courage to change the things which should be changed,  
the wisdom to distinguish one from the others.”**

**—Dr. Reinhold Niebuhr**

India is the second largest country as per the world population. In the last decade the population of India increased by 181 millions. There is a need to educate the people by appropriate technology to have a control over population growth. Survey from more than 60 developing countries indicates that more than 100 million people are currently not using contraceptive method and want to delay the birth of their child or to stop having children. 350 million couples do not have access to a choice of safe and affordable contraceptive method.

India is one of the few countries in the world to implement the population control programmes since 1951. The objective of the programme is that people should adopt a small family norm to stabilize the country's population at the level of 1533 million by the year 2050. The family planning programmes have always focused on women instead of men since yesteryears. Family planning has become a domain of women and one finds more women opting for permanent family planning methods than men.

Vasectomy for fertility control became popular in Europe and Asia in the 1940s, though historically the first known vasectomy was carried out in 1893 by Sir

Astley Cooper, on his pet dog. Since the advent of vasectomy, it is the world's leading family planning method for permanent contraception among men. None the less, tubal ligations are performed three to five times more commonly than vasectomies as some men equate vasectomy with castration or loss of masculinity, while others fear the surgical knife, pain and discomfort. Men who had undergone vasectomy experienced more pain and discomfort during and after the surgery. Therefore word-of-mouth accounts of discomfort contributed to the relatively low acceptance of vasectomy (Chaudhuri, S.K).

The introduction of No-Scalpel Vasectomy (NSV) technique which does not involve a scalpel has helped to increase the acceptability of sterilization among men as it is safe, simple, quick and has negligent complications than the traditional vasectomy. However lack of awareness still prevails among the community men who are willingly to accept to undergo 'No-Scalpel Vasectomy' as a new procedure with no surgical intervention and very low complication reduces the risk of female sterilization.

In the '50s and '60s, Vasectomy and Tubectomy were introduced as methods of permanent sterilization. The acceptability of conventional vasectomy declined and is now 1.9% had accepted of modern contraceptive methods. The main reasons for the decline are complications, fear of loss of libido and potency.

Dr. Li Shun-Qiang of the Chongqing Family Planning Scientific Research Institute in Sichuan Province of China was the first to develop and perform No-Scalpel Vasectomy in the year 1974. No-Scalpel Vasectomy was introduced in 1991 and the Government of India accepted it as a part of National Family Welfare Programme.

No-Scalpel Vasectomy is a simplified approach to vasectomy. The difference between this new method and conventional method is only in approach to the vas deferens. However, this difference is vital as it has resulted in lowered complication rate-as soon from the results of over 10 million vasectomies performed all over the world.

### **Scope of Men Participation**

The movement to involve men in reproductive health has many names, including Men's Participation, Men's Responsibility, Male Motivation, Male Involvement and Men Reproductive Health.

The main purpose is to describe a complex process of social and behavioral change that is needed for men to play more responsible roles in reproductive health.

Men's participation is crucial to enable millions of women to avoid unintended pregnancy. Men can help to protect the lives and health of women when they become mothers and can attend to health of their children. WHO estimates 585,000 women die each year from complications of pregnancy, childbirth and unsafe abortion, about one death every minute. Men play key roles during women's pregnancy and their decisions and actions often make the difference between illness and health, life and death.

Men's participation seen as a means to an end, rather than as a goal in itself. The goal is good reproductive health for all, and men can help in many different ways to make that a reality.

### **What is No-Scalpel Vasectomy?**

- It is a modern technique of permanent family planning method for men who desire not to have more children.
- It is safe, simple, scar less and a quick surgical procedure. It can be done in a hospital, Family Welfare Center with proper infection prevention procedures.

### **How does it work?**

A small opening is made in man's scrotum, the sac of skin that holds his testicles. A piece of Vas at-least 1cm is removed after clamping. The ends are legated and then folded back on them and sutured into position so that cut ends face away from each other. This keeps sperm out of this semen. The man still can have erections and ejaculate semen. His semen no longer makes woman pregnant, because it has no sperm in it. However he should use condoms till the semen analysis gives negative reports.

### **Need for Study**

In the new millennium, India has crossed the one billion mark, sharing 16 percent of the world population on 2.4 percent of the global land area. More than 18 million people are added every year. With the current trend it is projected that India may over take china in the 2045 to become the most populous country in the world, the distinction which no Indian would be proud of (Lohiya N.K. 2005).

The family welfare programmer focused attention on women to adopt spacing and permanent birth control methods. Currently men's involvement in regulating family size is negligible, as there is an argument that they do not have sufficient contraceptive choices to adopt compared to their female counterparts (Lohiya N.L.



2005). The choice of male contraception is limited to condom and male sterilization. The format is less acceptable because it reduces pleasure, has fear of failure, storage and disposal problems. Male sterilization is less popular because of fear of loss of virility and loss of physical strength. (Kaza R.C.M. 2006).

Acceptance of permanent family planning method is very poor in India and most of the users are females. The health status of females is poor when compared to males. Majority of women are anaemic due to complications in pregnancy and childbirth. Involvement of male in family planning will reduce female sterilization and the complications related tubectomy. Thus, health of the women can be improved.

#### India Statistics

Family Welfare Statistics in India 2010 estimated number of people who had undergone male sterilization has decreased from 0.04% in 2009–2010 to 0.03% in 2010–2011.

#### Tamil Nadu Statistics

Family Welfare Statistics in Tamil Nadu 2010 estimated number of people who had undergone male sterilization has decreased from 0.007% in 2009–2010 to 0.006% in 2010–2011.

#### Chennai Statistics

Family Welfare Statistics in Chennai 2010 estimated number of people who had undergone male sterilization has increased from 0.002% in 2009–2010 to 0.003% in 2010–2011.

The Statistics on performance of male sterilization in the India reveals that No-Scalpel Vasectomy is popular only in few countries. The reasons for No-Scalpel Vasectomy not so popular are socio cultural, religious compulsions and beliefs, illiteracy, unemployment, fear of loss of virility and loss of physical strength.

During my community specialty posting in Kundrathur, I noticed there none of them were unwilling to accept the No-Scalpel Vasectomy. The reasons for unwilling to adopt the No-Scalpel Vasectomy are socio cultural, religious compulsions and beliefs, illiteracy, unemployment, fear of loss of virility and loss of physical strength. Hence the researcher decided to find out the knowledge and attitude on No-Scalpel Vasectomy.

The Government has taken more steps to spread information about No-Scalpel Vasectomy. This created awareness not only among ignorant and illiterate people but also among the literate people. My purpose of the study is to assess adequate knowledge on No-Scalpel Vasectomy among School Teachers.

To improve the acceptance of No-Scalpel Vasectomy among men both the couples, counsel and clear their misconception of No-Scalpel Vasectomy and highlight the benefits on No-Scalpel Vasectomy than the tubectomy in rural and urban and tribal people and reduce the government expenditure and improve the quality of life.

### **Statement of the Problem**

A descriptive study to assess the knowledge and attitude on “No-Scalpel Vasectomy” among the teachers at Government Higher Secondary Schools in Chennai.

### **Objectives**

- To assess the level of knowledge and attitude regarding No-Scalpel Vasectomy among the teachers.
- To correlate the knowledge and attitude of teachers regarding No-Scalpel Vasectomy.
- To associate the level of knowledge and attitude regarding No-Scalpel Vasectomy with selected demographic variables.

### **Operational Definitions**

#### **Assess**

In this study it refers to, examining in order to judge or evaluate the knowledge and attitude of teacher's regarding No-Scalpel Vasectomy.

#### **Knowledge**

It refers to the ability of the teachers to understand and awareness regarding No-Scalpel Vasectomy which is measured by using knowledge questionnaire.

#### **Attitude**

It refers to the ability of the teachers, thinking and feelings about No-Scalpel Vasectomy.

#### **Teachers**

A Teacher refers to married men who have completed any one of the teaching programme and working in as a teacher in the Government Higher Secondary Schools at Chennai.

### **No-Scalpel Vasectomy**

A newer method of vasectomy by using a tiny puncture instead of scalpel cut to reach the vas deferens in the scrotum, which is effective as the conventional approach.

#### **Assumptions**

- No-Scalpel Vasectomy is a safe and effective contraceptive method.
- Teachers have less knowledge on No-Scalpel Vasectomy as a permanent contraceptive method among men.
- Providing adequate knowledge and promotes awareness about No-Scalpel Vasectomy.

#### **Delimitations**

The study is delimited to:

- Teachers with minimum of undergraduate qualification.
- The study was limited to a period of 6 weeks.

#### **Projected Outcome**

The study results will help to know the level of knowledge and attitude among the teachers regarding No-Scalpel Vasectomy and based on the results the investigator will prepare information booklet on No-Scalpel Vasectomy and distribute the same to all participants of the study.

## **CHAPTER – II**

### **REVIEW OF LITERATURE**

A Literature review involves the systematic identification, location and summary and written material that contain information on a research problem.

—Polit and Beck [2009]

The chapter deals with a review of published and unpublished research studies and form related materials for the present study. The review helped the investigator in building the foundation for the study.

Literature review is discussed under the following headings:

- Section – I : Literature Related to Advantages of Male Sterilization.
- Section – II : Literature Related to No-Scalpel Vasectomy Overview.
- Section – III : Literature Related to Knowledge and Attitude on No-Scalpel Vasectomy.

#### **Section – I: Literature Related to Advantages of Male Sterilization**

Anderson JE, et al (2010) conducted a study on Contraceptive Sterilization use among Married Men in the United States: This study concluded that one in eight married men reported having vasectomies.

Art KS, et al (2010) conducted a study on Techniques of vasectomy. This study suggested Vasectomy remains a safe and effective method of contraception for men. Many variations in surgical technique currently are used by surgeons in the United States, each with its own benefits and drawbacks.

Hadj-Moussa M, et al (2010) conducted a study on technique of Surgical Clips that prevents suture slippage when ligating folded vas deferens during vasectomy, Georgia, USA. This study concluded that placement of the ligating suture between two proximal clips and past a third distal clip prevents suture slippage when ligating the folded end of the vas deferens during vasectomy.

Marchi NM, et al (2010) conducted a descriptive study on vasectomy within the public health services in Campinas, São Paulo, Brazil. A sample of 202 men randomly selected from a list of all the men vasectomized between 1998 and 2004 in the public health network. This study revealed that difficulties exist in obtaining this contraceptive method in the public health service.

Michielsen D, et al (2010) conducted a study on State-of-the Art of non-hormonal methods of contraception on Male sterilization. This study concluded that vasectomy is a safe and a cost-effective intervention for permanent male contraception. The No-Scalpel Vasectomy under local anaesthesia is recommended. Occlusion of the vas is most successful when performed by means of an electrocautery; fascial interposition should complete the procedure.

Nian C, et al (2010) conducted study on factors influencing the declining trend of vasectomy in Sichuan, China. This study revealed vasectomy in Sichuan Province is influenced by multiple factors, including shifts in demographics, changes in family planning, working approach and people's perceptions of reproduction, lack of information and misunderstanding about vasectomy, the stereotype of male dominance, bias and preference of program and provider, and the impact of a market economy.

Rajni Dhingra, et al (2010) conducted a descriptive study to assess knowledge, understanding and attitude of couples towards family planning. Sample for the study comprised 200 married couples drawn from Jammu district through stratified random sampling technique. The study revealed that a high prevalence of illiteracy and associated ignorance among rural masses (35%), regarding the concepts and measures of family planning.

Shakeri S, et al (2009) conducted study on fascial interposition technique for vasectomy. This study revealed that combined use of fascial interposition with simple ligation and excision could be considered a simple effective method for No-Scalpel Vasectomy with a high success rate that allows the No-Scalpel Vasectomy to remain as a reliable option for contraception.

Daniel EE, et al (2008) conducted an experimental study to assess the effect of community based reproductive health communication interventions on contraceptive use among young married couples in Bihar, India. Random samples of married women below 25 with no more than one child were surveyed in 2002–2003. This study showed that contraceptive use was very low (2–6%) at the baseline in both comparison and intervention areas. Demand for contraception increased from 25% at the baseline, to 40% at follow up in intervention areas, but remained virtually unchanged in comparison areas.

Marchi NM, (2008) conducted a study on contraceptive methods with male participation of Brazilian couples. This study concluded that specific actions are necessary for men to achieve integral participation in relation to reproductive sexual health. These include education and discussions on gender roles, leading to greater awareness in men of the realities of sexual reproductive health.

Gubhaju B, (2006) conducted a descriptive study to assess the influence of wives and husbands education levels on contraceptive method choice in Nepal, 1996–2006. Data collected from currently married, non- pregnant women aged 15–49 in Nepal and health surveys of 1996, 2001 and 2006 were analysed. This study revealed that an educated women was more aware of male sterilization and condoms

Berisavac M, et al (2007) conducted study on modern trends and controversies of Contraception. This study suggested that ever since ancient civilizations, the possibility of preventing unwanted pregnancies have always been the subject of interest. All available contraception methods have both advantages and disadvantages, and it is up to the doctor and the patient to make a rational choice in each individual case. Many methods for temporary prevention of unwanted pregnancy are used for the purpose of contraception, as well as sterilization, as a permanent method.

Christensen RE, et al (2005) conducted a study on to assess the Postvasectomy semen analysis. Independence Park Medical Services, Anchorage, USA. 551 patients were reviewed Postvasectomy semen analysis (PVSA) is critical to establish the success of this sterilization procedure. This study concluded that Compliance with instructions to men undergoing vasectomy to return for PVSA is low both from the perspective of this study, as well as other studies evaluated. Older men are more likely to return for PVSA.

Labrecque M, et al (2004) conducted a study to assess if any surgical techniques to isolate or occlude the vas are associated with better outcomes in terms of occlusive and contraceptive effectiveness and complications. This study revealed that No-Scalpel Vasectomy as the safest surgical approach to isolate when performing



vasectomy and fascial interposition increases effectiveness beyond ligation and excision alone.

Sokal D, et al (2004) conducted a study on to compare the probability of the success of ligation and excision Vasectomy with, versus without fascial interposition. Eight outpatient clinics in seven countries North America, Latin America, and Asia were included in the study. This study concluded that fascial interposition significantly improves vasectomy success when ligation and excision is the method of vas occlusion. A limitation of this study is that the correlation between postvasectomy sperm concentrations and risk of pregnancy is not well quantified.

Oduy OO, (2006) conducted a cross-sectional study to determine men's knowledge and attitude to family planning at Ganmo, a sub-urban community on the outskirts of Ilorin, Nigeria. The study employed an interviewer who has administered semi-structured questionnaire to elicit information from 360 men in the households. Only males above the age of 15 years and resident in the community were selected for interview. Nearly all men (96.5%) were aware of family planning and a majority of them were aware of some common methods of family planning e.g. Oral Contraceptive Pills (OCPs) (72.5%), Injectables (69.2%), Condoms (86.6%) and Traditional methods (70.6%). Knowledge of other alternative female methods was low e.g. Norplant (17.5%), IUCD (26.3%), Diaphragm (39.8%), Vaginal cream (30.2%), Vaginal tablet (37.8%) and Vaginal sponge (16.8%), and Tubal Ligation (51.3%). Knowledge of male controlled family planning methods like Withdrawal (49.6%), Rhythm or periodic abstinence (54.6%) and Vasectomy (28.6%) was also poor. The finding revealed that men had limited knowledge and unfavourable attitude

towards Vasectomy. This study shows positive correlation between the level of knowledge and attitude regarding Vasectomy.

Galazions Gemin, et al (2001) conducted a retrospective study to investigate the factors influencing the contraceptive practice of the male and female population in the rural area of Thrace. This study concluded that there is an urgent need to promote information concerning the variety of modern contraceptive options.

N.P Das, et al (2000) conducted study on to access the use of health and family services in rural India. the study revealed that community assess does not have much influence on utilization of family planning services, once household level of socioeconomic and demographic variables are controlled. Main factors affecting utilization appear to be demand factors such as women's education, exposure to mass media and son preferences.

Rucksheek, et al (2000) conducted study on evaluating contraceptive choice through the method mix approach. This study revealed that majority opted for intra uterine device (60%), condoms (9%), and sterilization (17%). The economic status does not influence contraceptive choice.

Rumpass I, et al (2000) studied on women, men and contraceptive sterilization through interviewing 5,297 men in National Survey of Families and households. The last wanted birth is a major factor affecting sterilization choices, although significant effects were found as well as for a number of other variables, including age differences between spouses, education, and religion.

## **Section – II: Literature Related to No-Scalpel Vasectomy Overview**

Aggarwal H, et al (2010) conducted a comparative study on to assess the pain during anaesthesia and during the No-Scalpel Vasectomy procedure for local infiltration anaesthesia, supplemented with spermatic cord block (local infiltration anaesthesia + spermatic cord block), and no needle jet anaesthesia. Bilateral No-Scalpel Vasectomy was performed in 323 patients in 2007. Of the 323 patients, 65 received local infiltration anaesthesia, 29 received local infiltration anaesthesia + spermatic cord block, and 227 received anaesthesia's using the no-needle technique with the MadaJet device. This study concluded that local infiltration anaesthesia + spermatic cord block is an effective and better method of anaesthesia compared with local infiltration anaesthesia alone or no-needle jet anaesthesia for reducing the pain during vasectomy. Also, no difference was found in the pain levels during anaesthesia for the local infiltration anaesthesia + spermatic cord block, local infiltration anaesthesia and no-needle anaesthesia techniques.

Akhavizadegan H, et al (2010) conducted a study on novel technique of No-Scalpel Vasectomy. Baharloo Hospital, Tehran University of Medical Sciences, Tehran, Iran. This study revealed that vasal head-to-head and tail-to-tail ligation in No-Scalpel Vasectomy shows promise as a safe and effective sterilisation procedure.

Grober ED, et al (2010) conducted a study on Mini-Incision Vasectomy Reversal (MIVR) Using No-Scalpel Vasectomy Principles. Efficacy and Postoperative Pain Compared with Traditional Approaches to Vasectomy Reversal (VR). This study sample of 164 patients undergoing consecutive VR, 139 underwent bilateral vasovasostomy (55% bilateral MIVR, 24% mixed MIVR/traditional incision

VR, and 21% bilateral traditional incision VR). This study revealed that MIVR does not compromise potency outcomes or semen parameters compared with more traditional approaches to VR and results in less pain during the early period of recovery after surgery and quicker functional recovery.

Lara-Ricalde R, et al (2010) conducted a Retrospective Cohort Study on to determine the characteristics, complications and results of the men who requested and underwent No-Scalpel Vasectomy in Instituto Nacional Deperinatologia Isidro Espinosa De Los Reyes in Mexico. This study revealed that the profile of men who requested No-Scalpel Vasectomy was in a great proportion healthy, in the fourth decade of life, with high school or greater, satisfied fertility and high socio-economic status. No-Scalpel Vasectomy is a method of fertility planning and is very effective with low morbidity.

Shih G, et al (2010) conducted prospective study on minimizing pain during vasectomy: the mini-needle anaesthetic technique. A sample of 277 patients was studied performed. This study concluded that mini-needle technique provides excellent anaesthesia for No-Scalpel Vasectomy. It compares favourably to the standard vasal block and other anaesthetic alternatives with the additional benefit of minimal equipment and less anaesthesia.

United Nation Department of Economic and Social Affairs, Population Division (2010) estimated globally 2.8% of people; in under-developed countries 2.5% of people, in developed countries and 4.8% of people have undergone male sterilization.

United Nation Department of Economic and Social Affairs, Population Division (2010) estimated that 19.8%, 6.1%, and 1% in United Kingdom, China and India have undergone male sterilization.

Busato WF, et al (2009) conducted a study on to determine factors and characteristics associated with the success rate of reversal in a population in Southern Brazil. 29 cases of vasectomy reversal performed over a 7-year period using the single-layer technique under microscopic magnification. This study concluded that High patency and pregnancy rates are associated with time intervals since vasectomy of less than 10 years and vasectomies performed by urologists. There was no significant difference in the anastomosis time between the first 12 procedures and the next 12 procedures.

French DB, et al (2009) conducted a study on Advances in Microsurgery and Assisted Reproduction for Management of Male Infertility. Glickman Urological and Kidney Institute, Cleveland Clinic, USA. This study revealed that microsurgical techniques are often used for reconstruction of the male genital tract in order to restore fertility. Advances in technology have led to improved outcomes for patients and men previously felt to be incapable of fathering children are now biological parents.

Kolettis PN, et al (2009) conducted a study on restructuring reconstructive techniques advances in reconstructive techniques. This study revealed that Microsurgical reconstruction to correct male infertility, although usually performed for vasectomy reversal, also performed to correct other types of iatrogenic, congenital, and post inflammatory obstruction.

Naza RK, et al (2009) conducted study an update on male contraception. This study suggested that current options for male contraception are barrier methods such

as condoms and surgical methods, such as vasectomy. Condoms are coital-dependent and not always reliable as they are prone to slippage and breakage. Vasectomy has the advantage of being coital-independent and is permanent.

Pile JM, et al (2009) conducted study on demographics of vasectomy, USA. This study suggested vasectomy is safer, simpler, less expensive, and equally as effective as female sterilization. Yet it remains one of the least known and least used methods of contraception. Worldwide, an estimated 33 million of married women ages 15 to 49 (less than 3%) rely on their partner's vasectomy for contraception.

Trollip GS, et al (2009) conducted study to evaluate the safety and efficacy of vasectomy performed under local anaesthesia by junior doctors at a secondary level hospital as part of a free family planning service. Department of Urology, Stellenbosch University and Tygerberg Hospital, Tygerberg, Western Cape. This study concluded that Vasectomy can be performed safely and effectively by junior doctors as an outpatient procedure under local anaesthesia, and should be actively promoted in South Africa as a safe and effective form of male contraception.

Himanshu Aggarwal, et al (2008) conducted a Comparative study on to assess pain during anesthesia and during the No-Scalpel Vasectomy procedure for local infiltration anesthesia (LIA), LIA supplemented with spermatic cord block (LIA + SCB), and no needle jet anesthesia. Bilateral No-Scalpel Vasectomy was performed in 323 patients during 2007. Of the 323 patients, 65 received LIA, 29 received LIA + SCB, and 227 received anesthesia using the no-needle technique with the MadaJet device. This study revealed that LIA + SCB is an effective and better method of anesthesia compared with LIA alone or no-needle jet anesthesia for reducing the pain

during vasectomy. Also, no difference was found in the pain levels during anesthesia for the LIA + SCB, LIA, and no-needle anesthesia techniques.

Jarvi K, et al (2008) conducted a study on mini-incision microsurgical vasectomy reversal using No-Scalpel Vasectomy. Mount Sinai Hospital, University of Toronto, Canada. This study suggested that although the No-Scalpel Vasectomy technique has been proved to reduce morbidity compared with standard vasectomy, whether the use of the No-Scalpel principles and instruments in a vasectomy reversal translates into a decrease in surgical morbidity is unknown.

Roshani A, et al (2008) conducted a study on to assess irrigation of the vas deferens with sterile water or hypertonic saline solution irrigation during vasectomy would reduce the time needed to obtain azoospermia. Department of Urology, Razi Hospital, Gilan University of Medical Sciences, Rasht, Iran. This study revealed that vasal irrigation with sterile water and hypertonic saline solution during vasectomy were effective in removing sperm from the distal vas and increasing the rate at which men achieved azoospermia. Sterile water was a promising option with no complications.

Thomas AA, et al (2008) conducted a study on the effectiveness of Eutectic Mixture of Local Anaesthetics (EMLA) cream to decrease pain during vasectomy. Glickman Urological and Kidney Institute, Cleveland Clinic Foundation, Cleveland, USA. A prospective study was performed in which 316 patients used EMLA cream (178) or no topical anaesthesia (138) before vasectomy. This study revealed that Topical anaesthesia with EMLA did not significantly decrease the pain associated with percutaneous vasectomy.

Cook LA, et al (2007) conducted study on Scalpel versus No-Scalpel incision for vasectomy. This study concluded that No-Scalpel approach to the vas resulted in less bleeding, hematoma, infection, and pain as well as took a shorter length of time than the traditional incision technique.

Kaza RC, et al (2007) conducted a study on No-Scalpel Vasectomy an overview. This study revealed that male sterilization is less popular because of fear of loss of virility and loss of physical strength. No-Scalpel Vasectomy is a surgical attempt to reduce complications and thereby allays the fear in the minds of the couples.

Sharma RP, et al (2007) conducted a study on No-Scalpel Vasectomy advocacy and community mobilization a personal experience. This study revealed that Communication Technology serves to mobilise and educate people, especially rural population. Some steps are suggested to reach the remotest villages which are elaborated. Counselling is an essential part of motivation to the client. During the last 5 years a significant has been noticed in terms of access to new communication technologies. This may be employed to successfully implement the family planning programme.

Karpman E, et al (2006) conducted a study on to assess the role in the era of intracytoplasmic sperm injection in vasectomy reversal. The study revealed that vasectomy reversal is highly contingent on adherence to strict surgical principles of creating a water-tight, tension-free anastomosis, along with the appropriate decision whether to perform either a vasovasostomy or epididymovasostomy at the time of vasectomy reversal.



Dassow P, et al (2005) conducted study on update on vasectomy an update. This study suggested that Men who receive vasectomies tend to be non-Hispanic whites, well educated, married or cohabitating, relatively affluent, and have private health insurance. The strongest predictor for wanting a vasectomy reversal is age younger than 30 years at the time of the procedure. Evidence supports the use of the No-Scalpel technique to access the vasa, because it is associated with the fewest complications. No data show that vasectomy increases the risk of prostate or testicular cancer.

Griffin T, et al (2005) conducted a study on to assess sterility after vasectomy through Post-vasectomy semen analysis. Australian Safety and Efficacy Register of New Interventional Procedures-Surgical, Royal Australasian College of Surgeons, Adelaide, South Australia, This study revealed that Post-vasectomy semen analysis protocol with 1 test showing azoospermia after 3 months and 20 ejaculations. If the sample is positive, periodic testing can continue until azoospermia is achieved. Patients with persistent nonmotile sperm in low numbers could be given cautious assurance of success.

Gutmann MC, et al (2005) conducted a study on vasectomies and the totemic illusion of male sexuality in Oaxaca. This study concluded that Vasectomy as a method of birth control is chosen despite folk beliefs that take the form of a totemic illusion which treats male sexuality as naturalized, something fixed, and as entirely distinct from female sexuality. Among its many consequences, this totemic illusion serves to conceal inequalities in the sphere of reproductive health and sexuality in relation to contraception.

Kuan-chou chan, et al (2005) conducted a comparative study to assess the difference in simply modified No-Scalpel Vasectomy technique and standard No-Scalpel Vasectomy. 417 men were prospectively randomized to be vasectomized at the Taipei Medical University Hospital. 215 acceptors underwent standard No-Scalpel Vasectomy and the remaining 202 received the simply modified No-Scalpel Vasectomy. This study concluded the simply modified vasectomy technique simplifies the SNSV technique. It combines the minimally invasive nature of simplify the Standard No-Scalpel Vasectomy (SNSV) with the simplicity of classical vasectomy while conserving many comparable advantages.

Parekattil SJ, et al (2005) conducted a retrospective study on to assess the need for a vasoepididymostomy (VE) when performing a vasectomy reversal, Glickman Urologic Institute, Cleveland Clinic Foundation, Cleveland, Ohio, USA. A sample size was 483 patients. The study revealed that model is 100% sensitivity in detecting those patients who may require a VE during vasectomy reversal (specificity of 58.8%). It may allow urologists to preoperatively identify these patients.

Seenu V, et al (2005) conducted a study on to assess Routine antibiotic prophylaxis is necessary for No-Scalpel Vasectomy. Department of Surgical Disciplines, All India Institute of Medical Sciences, New Delhi, India. Post-operatively patients were advised an oral anti-inflammatory drug for 3-5 days and were reviewed after 1 week for development of wound infection. Over a 4-year period, 322 patients underwent NSV and no patient developed wound infection. This study concluded that routine antibiotic prophylaxis is not necessary for NSV.

Steward B, et al (2005) conducted a study on to evaluate the accuracy of a pre-centrifugation determination of azoospermia compared with post-centrifugation

results. 2,104 samples categorized as azoospermic before centrifugation, post-centrifugation analysis demonstrated that all but 4 (99.8%) were azoospermic or had a sperm concentration of less than 100,000 sperm per ml. The study revealed that Microscopic examination of uncentrifuged specimens is a reliable method for identifying semen samples after vasectomy with more than 100,000 sperm per ml.

Weiss RS, et al (2005) conducted a study on no-needle jet anaesthetic technique for No-Scalpel Vasectomy. This study concluded that, no-needle anaesthesia with jet injection is a new technique to deliver rapid onset of profound local anaesthesia to the patient undergoing vasectomy. It is a simple and safe approach with high patient satisfaction, as reflected in low pain scores. The benefit of this technique without a needle is that it may decrease the fear of pain in men and enhance the popularity of vasectomy worldwide.

Brian Eisner MD, et al (2004) conducted a study on a randomized clinical trial of the effect of intraoperative saline perfusion on postvasectomy azoospermia. This study revealed that vasal perfusion with saline during vasectomy was effective in removing sperm from the distal vas; however, perfusion did not increase the rate at which men achieve azoospermia.

Chawla A et al (2004) conducted a study on to examine patient compliance, complications, and significance of rare nonmotile sperm (RNMS) after No-Scalpel Vasectomy. Division of Urology, Department of Surgery, Mount Sinai Hospital, University of Toronto, Toronto, Ontario, Canada. A total of 315 men (45.6%) did not submit any semen samples. Of the 295 men who submitted two samples, 176 (60%) were azoospermic, 110 (37%) had RNMS, and 9 men (3%) had rare motile sperm (the vasectomy of 1 of these 9 men subsequently failed). Of the 110 men with RNMS, 83

submitted one or more additional semen samples. Of these 83 men, 62 (75%) had become azoospermic, 20 (24%) had persistent RNMS, and 1 (1%) subsequently had a failed vasectomy (with motile sperm). The 2 patients with failure underwent a repeat vasectomy (failure rate 0.67% [2 of 295]). A total of 69 patients (10%) reported a complaint, but only 9 (1.5%) of these men returned for clinical examination. No surgical complications and no pregnancies occurred. This study revealed that most men with RNMS become azoospermic and propose that the presence of RNMS is consistent with a successful vasectomy. However, long-term, prospective studies are needed to assess the risk of late failure in men with RNMS.

Raleigh D, et al (2004) conducted a study on stereological analysis of the human testis after vasectomy, Australia. This study revealed that vasal obstruction results in significant reductions in germ cells in the later stages of spermatogenesis and increases in testicular fibrosis, both worsening with an increasing obstructive interval. Testicular damage after vasectomy might impact upon the prospects for reversal.

Labrecque M, et al (2003) conducted a cohort study on to assess association between the length of the vas deferens excised during vasectomy and the risk of postvasectomy recanalization. A sample size was 870 vasectomized men, all 47 cases of spontaneous recanalization and 188 controls whose first semen analysis showed either azoospermia (controls A) or  $<1 \times 10^6/\text{mL}$  nonmotile sperm (controls B). This study revealed that was no association between the length of vas segment excised and the risk of recanalization.

Black T, et al (2002) conducted a retrospective study on to assess evolution of the Marie Stopes electrocautery No-Scalpel Vasectomy procedure. Marie Stopes International, London, UK. A total of 41 123 men undergoing vasectomy. This study concluded that vasectomy has had a low failure rate well below that of other methods of birth control. The outcome data continue to improve over time with the evolution of improved techniques and surgical expertise.

Dr. Nagarajappa, (2002) conducted a study on knowledge of the married men on No-Scalpel Vasectomy in Bangalore. This study was done on married men living with their wives and having one or more children. 200 married men selected and who used multistage random sampling technique and the data was collected by using closed-ended questionnaire. This study concluded that married men had very poor knowledge on NSV. However, among 32% who were aware of NSV, majority of them understood what was vasectomy.

Koza (2001) conducted a study on factor which was essential to modify the services to the fear of women related to complication of No-Scalpel Vasectomy such as loss of physical strength of wages, fear of failure of operation and suspected the women's character and the fear of extra marital sex. This study concluded that males were well informed through education should be provide.

Marmar JL, et al (2001) conducted a study on newer technique of minimally invasive vasectomy, Clinical Research Division, Family Health International, Durham. The study revealed that new method of vas occlusion seems to be rapid and compatible with the No-Scalpel Vasectomy instruments.

Badrakumar C, et al (2000) conducted a study on to assess patient compliance for semen analysis after vasectomy, Pinderfields & Pontefract Hospitals NHS Trust,

Wakefield, West Yorkshire, UK. The study revealed that compliance was better in group 1; when the patients in group 2 were asked to provide a second sample the compliance decreased significantly. The percentage of patients producing an azoospermic sample was similar for semen provided after 3 and 4 months. Thus, provided that the patient is adequately warned about the risk of failure of the vasectomy at any time during his life, a single semen analysis after 3 months is sufficient grounds for discontinuing other contraceptive precautions.

Bing XU, et al (2000) conducted a study on overview on No-Scalpel Vasectomy outside China. This study revealed that advantages of the No-Scalpel technique, including no incision, no stitches, faster procedure, faster recovery, less chance of bleeding, less discomfort and high efficacy. No-scalpel technique provides a good approach to expose the vas, in conjunction with which, different vas-end occlusion methods may be used.

Holman CD, et al (2000) conducted a study on Population-Based Outcomes after 28,246 In-Hospital Vasectomies and 1,902 vasovasostomies in Western Australia. This study suggested that population rates of vasectomy are stable but the risk of seeking a reversal has increased. Outcomes after vasovasostomy have improved. Care should be taken during the counselling of men before vasectomy, and especially for those aged less than 30 years.

Viladoms Fuster JM, et al (2000) conducted a study on to assess the advantages of No-Scalpel Vasectomy, Hospital General de Cataluña, España. A sample size was 100. This study revealed that No-Scalpel Vasectomy requires no incision, no stitches; it is faster to perform and with less complications, and is equally effective. No-Scalpel Vasectomy involves new techniques and new surgical methods,

and thus requires training. But its greater speed, simplicity, and freedom from side effects constitute advantages over traditional incisional techniques.

### **Section – III: Literature Related to Knowledge and Attitude on No-Scalpel Vasectomy.**

Amory JK, et al (2010) conducted a study on the effectiveness of vasectomy Asian Journal of andrology. This study revealed that Vasectomy by epithelial curettage can result in effective sterilization; however, 1/4 of the subjects were not effectively sterilized by the procedure due to re-canalization of the vas deferens. Epithelial curettage will require further refinement to determine if it is a viable form of vasectomy.

Singh D, et al (2010) conducted a study on to assess the impact of intraoperative distal vasal flushing during No-Scalpel Vasectomy. Centre of Excellence for No-Scalpel Vasectomy and Department of Urology, CSM, Medical University (Upgraded King George's Medical College), Uttar Pradesh, India. A sample size was 727. This study revealed that Distal vasal flushing with 30 ml of sterile water may shorten the time to azoospermia for between 20% and 30% of vasectomy patients. Thus, this procedure may be an option for some who choose the vasal flush to avoid the long duration of postvasectomy alternate contraceptive methods.

Subramanian L, et al (2010) conducted a study on to assess the knowledge and acceptance of No-Scalpel Vasectomy between client and provider in Ghana. The study revealed that trained health staff exhibited improved attitudes and knowledge regarding No-Scalpel Vasectomy and clients reported receiving accurate,

nonjudgmental No-Scalpel Vasectomy counseling. Awareness of No-Scalpel Vasectomy among panel respondents doubled from 31% to 59% in 2003–2004 and remained high (44%) in 2008.

Yoo KH, et al (2010) conducted a retrospective study on to assess technique on vasectomy. Department of Urology, Kyung Hee University School of Medicine, Seoul, South Korea. This study revealed that Scrotal ultrasound showed the presence of enlargement and decreased echogenicity of more than the upper two-thirds of the right testis. After orchiectomy, scrotal pain disappeared. This is the first report of simple orchiectomy after subtotal testicular infarction due to a suture tie of vasectomy. During vasectomy, it is important to dissect the bare vas to minimize vascular injury.

Okunlola, MA, et al (2009) conducted a study on awareness and practice of vasectomy among married male health workers at the University College Hospital, Ibadan, Nigeria. This study concluded that some health workers are not aware of vasectomy or have some misconceptions about it. Family planning and contraception should be inculcated into the curricula of schools producing health workers such as laboratory scientists, radiographers etc. This will go a long way in improving their knowledge and attitude to vasectomy.

Robb P, et al (2009) conducted a study on cost-effectiveness of vasectomy reversal. This study suggested that era of cost-consciousness and containment, it is imperative to examine not only treatment outcomes but also cost of these treatments. With improvements of in vitro fertilization outcome and continued development of less-invasive sperm retrieval methods, physicians and couples must examine all options available after surgical sterilization.



Tang LF, et al (2009) conducted a meta-analysis study to evaluate the association between vasectomy and prostate cancer. A total of 20,088 cases and 232 506 controls in 27 reports (7 cohort and 20 case-control studies) were included in this investigation. This study revealed that no existing literature showed any positive association between vasectomy and prostate cancer.

Trollip GS, et al (2009) conducted a study to evaluate the safety and efficacy of vasectomy performed under local anaesthesia by junior doctors at a secondary level hospital as part of a free family planning service. Department of Urology, Stellenbosch University and Tygerberg Hospital, Tygerberg, Western Cape. This study concluded that Vasectomy can be performed safely and effectively by junior doctors as an outpatient procedure under local anaesthesia, and should be actively promoted in South Africa as a safe and effective form of male contraception.

Bunce A, et al (2007) conducted a study on factors affecting vasectomy acceptability in Tanzania. This study suggested that spousal discussion is important in the decision to get a vasectomy, but these discussions should be initiated by the male partner. Programs need to educate men about contraceptive options including vasectomies. Detailed cultural relevant knowledge of the barriers and facilitators, individuals' experience during their decision making process, will enable vasectomy promotion programs to more successfully target appropriate populations.

Cook LA, et al (2007) conducted a study to compare the effectiveness, safety, and acceptability of the incisional versus No-Scalpel Approach to the Vas. Randomized controlled trials and controlled clinical trials were included in this review. This study concluded that the No-Scalpel approach to the vas resulted in less bleeding, hematoma, infection, and pain as well as a shorter operation time than the

traditional incision technique. No difference in effectiveness was found between the two approaches.

Cook LA, et al (2007) conducted a comparative study on effectiveness of vasectomy occlusion techniques for male sterilization. This study revealed that fascial interposition is associated with improved vasectomy success but is associated with some increased surgical difficulty. Randomized controlled trials examining other vasectomy techniques were not available. More research is required to examine vasectomy techniques.

White MA, et al (2007) conducted a study on to compare the effectiveness of two local anaesthetic techniques in men undergoing No-Scalpel Vasectomy. Michigan State University College of Osteopathic Medicine Urologic Consortium, Grand Rapids, Michigan, USA. This study revealed that No-needle anaesthesia with jet injection reduced the pain associated with traditional delivery of anaesthesia to the skin and vas deferens before No-Scalpel Vasectomy.

Yancy Seamans, et al (2007) conducted a study on cost-effectiveness of different vasectomy methods in India, Kenya, and Mexico. This study revealed that Vasectomy Methods with higher effectiveness, although they increase the incremental cost of providing a vasectomy, still reduce the number of unintended pregnancies after vasectomy and may provide additional benefits to vasectomy programmes.

Tavakoli R, et al (2005) conducted study on Knowledge of and attitudes towards family planning by male teachers in the Islamic Republic of Iran. A cross-sectional study was carried out on knowledge of and attitudes to family planning in male teachers working in the education system in Teheran. This study revealed that 65% of the study population had acceptable knowledge regarding the issue. More than

95% of respondents reported having a favourable attitude towards the implementation of family planning programmes and about 90% believed that decision-making regarding use of contraceptives should be a joint process.

Cook LA, et al (2004) conducted comparative study to assess the effectiveness, safety, acceptability and costs of vasectomy techniques for male sterilization. This study revealed that fascial interposition reduced vasectomy failure. An intra-vas device was less effective in reducing sperm count than was No-Scalpel Vasectomy.

Ghazal, et al (2002) conducted a study on knowledge and practice of contraception among men in the United Arab Emirates. This study revealed that the level of awareness of contraception among men attending primary care in United Arab Emirates is moderate. Two thirds of study subjects objected to the use of contraception by their wives and 20% practice contraception themselves. This is partly due to sociocultural traditional, religious, beliefs and poor knowledge.

Mason RG, et al (2002) conducted a study on to assess the effect of irrigation of the distal vas deferens with sterile water at the time of vasectomy on sperm clearance. Department of Urology, Aberdeen Royal Infirmary, Aberdeen, United Kingdom. This study revealed that Irrigation of the vas deferens with sterile water does not accelerate the clearance of spermatozoa after vasectomy. Men wishing to undergo vasectomy must be counselled about the possibility of lingering sperm.

Dibaha (2001) conducted a descriptive study on the attitude of rural men towards No-Scalpel Vasectomy as means of contraception was conducted South western Ethiopia. A sample of 200 men who came to rural health centre either for treatment or to accompany a patient were included for interview, none of the

respondents was against the use of contraceptives and none of them had heard of No-Scalpel Vasectomy as means of contraceptives. This study revealed that acceptance of No-Scalpel Vasectomy was 79% and 21% opposed No-Scalpel Vasectomy because of the problem of possible loss of children due to death or divorce.

Schwingl, et al (2000) performed study on safety and effective of vasectomy using a systematic review of literature on the safety and effectiveness of vasectomy between 1964 and 1998. This study concluded that vasectomy is highly effective form of contraception.

## **CONCEPTUAL FRAMEWORK**

The conceptual framework deals with the inter-related concepts that are assessable together in some rational schemes by virtue of their response to the common theme.

— [Poliot & Beck 2004]

The theoretical framework for research study presents that the reasoning on which the purposes of the proposed study are based.

Theoretical framework consists of concepts and preposition about how these concepts are related. The frame serves three important functions in Nursing Research.

- It classifies the concepts on which the study is built.
- It identifies and states the assumptions.
- It specifies relationships among the concepts.

The framework provides the prospective, from which the investigator views the problem, is not merely restatement of preview research but an integration of the enlisting theoretical traditions and knowledge about the topic.

### **Modified Leninger's Culture Care Diversity Model**

A conceptual framework refers to concepts that structure or offer a framework of prepositions for conducting research.

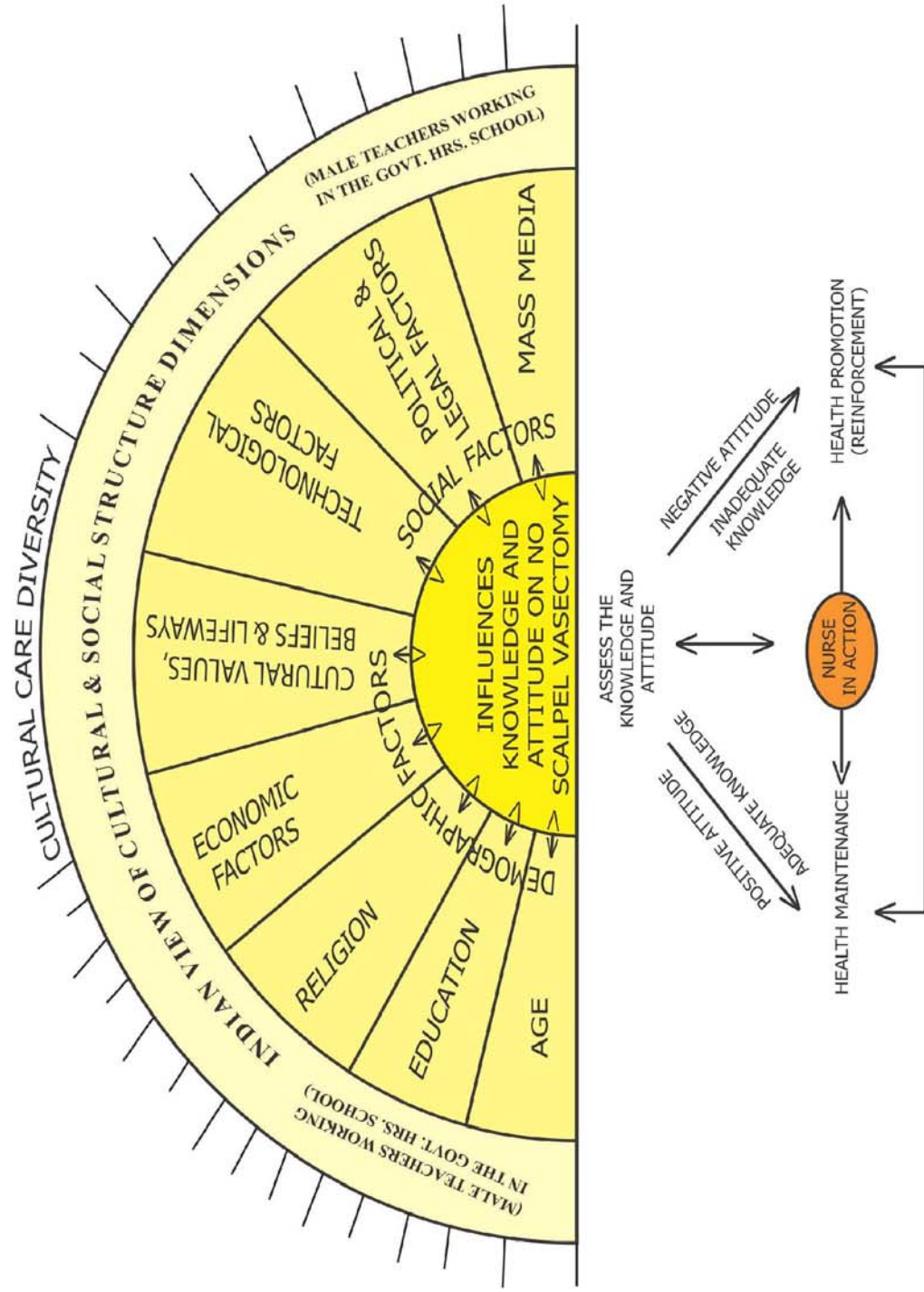
The conceptual framework setup for the study is a modified model of Leninger's Culture Care Diversity Known as, "Sunrise Model" Leninger's defines the culture care diversity theory as "sets of interested concepts, constructs, expressions,

meanings and experiences that describe, explain predict and account for some phenomena or domain of inquiry through an open, creative and naturalistic discovery process.

The Model is adopted in a modified form for the present study. This model conceptually depicts the religion, cultural values, economics, technology, environmental factors that are predicted to explain and influence the knowledge and attitude regarding No-Scalpel Vasectomy as a contraceptive method.

- Age : Age of the Teacher
- Education : Educational Status of the Teacher
- Religion : Religious Values and Beliefs
- Occupation : Teacher
- Economic Factors : Income of the Teacher
- Cultural Values Belief and Lifeways : Cultural Value existing in the Teacher
- Technological Factors : The Advanced Technology No-Scalpel Vasectomy
- Mass Media : Mass Media providing Information's regarding No-Scalpel Vasectomy
- Political and Legal Factors : Governments Steps to Improve No-Scalpel Vasectomy Services, Family Planning norms, and health care facilities offered

Researcher adopted the model and perceived it to be apt in enabling to assess the knowledge and attitude regarding No-Scalpel Vasectomy as a contraceptive method. Based on the findings of the assessment the community health nursing could plan the activities for health promotion and health maintenance.



**FIGURE-1 MODIFIED LENINGER'S CULTURE CARE DIVERSITY MODEL (SUNRISE MODEL) - 2002**



## **CHAPTER – III**

### **RESEARCH METHODOLOGY**

Methodology of research refers to the investigation of the ways of obtaining, organising and analyzing data. Methodology study addresses the development in validation and evaluation of research tools and methods.

—Polit [2004]

This chapter deals with research approach, research design, setting, population, sampling, sample size, sampling technique, criteria for sample collection, development and description of tool, validity, reliability, pilot study, data collection procedure, data analysis and protection of human rights.

The present study aims study to assess the knowledge and attitude on No-Scalpel Vasectomy among the teachers who are working in Government Higher Secondary Schools at Chennai.

#### **Research Approach**

The research approach used for this study was quantitative approach.

#### **Research Design**

Descriptive Design was adopted for the Study.

#### **Setting**

The Study was conducted in 11 Government Higher Secondary Schools in South and Central Zones of Chennai.

### **Population**

The population of this study was all the teachers who are working at Government Higher Secondary Schools in Chennai.

### **Sample**

Married male teachers who are working at selected Government Higher Secondary Schools in Chennai.

### **Sample Size**

The sample consists of 100 male married teachers at selected Government Higher Secondary Schools in Chennai.

### **Sampling Technique**

The non-probability convenient sampling technique.

### **Inclusion Criteria**

- Married male teachers, who are working at selected Government Higher Secondary Schools in Chennai.
- The Teachers who are willing to participate in the study.
- Teachers who are available at the time of data collection.

### **Exclusion Criteria**

- Female Teachers.

### **Data Collection Tool**

A structured questionnaire was developed on the basis of review of literature, discussion with experts and from personal experiences of the investigator. The tool consists of three sections:

- (a) Demographic Variables
- (b) Questionnaire knowledge of No-Scalpel Vasectomy
- (c) Questionnaire on Attitude of No-Scalpel Vasectomy

### **Description of the Tool**

The tool consists of three sections

- |             |   |  |
|-------------|---|--|
| Section I   | : | Demographic Variables  |
| Section II  | : | Multiple Choice Question's (MCQ) to assess the Knowledge on No-Scalpel Vasectomy |
| Section III | : | Rating scale to assess the attitude on vasectomy                                 |

#### **Section I**

##### **Demographic Variables**

This section consists of demographic variables such as age, type of family, religion, education, training, income per month, number of living children, source of health information, whether family members or friends have adopted vasectomy and if so, its outcome; and whether he has adopted any family planning method at any time and if so, the method. This contains ten items.

## Section II

MCQ's to assess the knowledge on vasectomy

This section is further divided in to three parts.

- I : Knowledge on Family Welfare Methods.
- II : Knowledge on Advanced Technique (No-Scalpel Vasectomy).
- III : Knowledge on Health Services.

Knowledge questionnaire which comprises of fifteen questions with the minimum score of 0 to maximum score of 15.

## Scoring Key

The structured interview consisted of 15 questions totally. Each question had only one correct response which carried one mark and for incorrect response no score was given. The total scoring for overall knowledge was 15.

The level of knowledge scores were converted to percentage and were classified as follows:

<50%	–	Inadequate Knowledge
50–75%	–	Moderate Knowledge
>75%	–	Adequate Knowledge

## Section III

Rating scale to assess the attitude on No-Scalpel Vasectomy

This section contains of 10 statements related to positive and negative attitude on No-Scalpel Vasectomy.

Positive attitude items had five responses for which the marks were awarded as follows:

- 4 marks for strongly agree
- 3 marks for agree
- 2 marks for disagree
- 1 marks for strongly disagree
- No marks for don't know

Negative attitude items had five responses for which the marks were awarded as follows:

- 1 marks for strongly agree
- 2 marks for agree
- 3 marks for disagree
- 4 marks for strongly disagree
- No marks for don't know

Positive Attitude Questions – 1, 2, 4, 9, 10

Negative Attitude Questions – 3, 5, 6, 7, 8

Totally a maximum of 40 marks was given.

#### Scoring Key

The level of attitude scores were converted to percentage and were classified as follows:

<50%	–	Unfavourable Attitude
50–75%	–	Favourable Attitude
>75%	–	Most Favourable Attitude

**Table 1: Blue print on knowledge questionnaires of No-Scalpel Vasectomy**

S. No	Content	Item	Total
1.	Family Welfare Method	1,2,3,4	4
2.	Advance Technique on No-Scalpel Vasectomy	1,2,3,4,5,6,7,8	8
3.	Health Services on No-Scalpel Vasectomy	1,2,3	3

### **Validity**

The tool was sent to the experts in the field of Nursing and Medicine for the approval of validity and the needed modifications were made.

### **Reliability**

The reliability of the tool was established through a pilot study. Reliability was tested using the test - retest method and the 'r' value was 0.87.

### **Pilot Study**

The pilot study was conducted for one week after getting permission from the Principals of the following Schools namely Padma Subramaniam Bala Bhavan Matriculation Higher Secondary School, Nav Bharath Vidyalaya Matriculation Higher Secondary School, Dawn Matriculation Higher Secondary School and St. Mary's Matriculation Higher Secondary School at Mangadu. The study was conducted on 10 male teachers regarding No-Scalpel Vasectomy as per the inclusion

criteria. The investigator gave a brief introduction about the study and the informed consent was obtained from the teachers. The data was collected by the investigator using a knowledge questionnaire and attitude scale. The results proved that the tool is valid and reliable. The teachers selected for the pilot study were excluded in the main study.

### **Data Collection Procedure**

The investigator obtained a formal permission from the Chief Educational Officer. The study was conducted for a period of six weeks from 1<sup>st</sup> June to 12<sup>th</sup> July 2011. The investigator selected hundred male teachers in Government Higher Secondary Schools by non-probability convenient sampling method. The Study was conducted in 11 Government Higher Secondary Schools in South and Central Zones of Chennai. The investigator gave a brief introduction about the study and the informed consent was obtained from the teachers. Two to three samples were selected per day to assess the knowledge and attitude by using structured questionnaire. The data collection was done as per the following schedule:

Date	Number of Days	Number of Sample
01.06.2011 to 04.06.2011	4	12
06.06.2011 to 11.06.2011	6	17
13.06.2011 to 18.06.2011	6	16
20.06.2011 to 25.06.2011	6	17
27.06.2011 to 2.07.2011	6	16
04.07.2011 to 09.07.2011	6	16
11.07.2011 to 12.07.2011	2	6

### **Human Rights Protection**

The pilot and main study were conducted only after the approval of the research proposal by the College of Nursing and the Institutional Ethical Committee. The permission was also obtained from the concern Head of the Department to conduct the study.



## **CHAPTER IV**

### **ANALYSIS AND INTERPRETATION**

The Chapter deals with analysis and interpretation of data collected from 100 school teachers of vulnerable community to assess knowledge and attitude towards No-Scalpel Vasectomy.

The term analysis refers to the computation of certain measures along with searching for pattern of relationship that exists. The data after collection has to be processed and analyzed in accordance with the outline set down to the purpose at the time of developing the research plan.

Descriptive and inferential statistics were used for analyzing the data on the basis of objectives at the study. The interpretation has been tabulated and organized as follows:

- Section – I : Demographic variables among the teachers.
- Section – II : Assessment of knowledge on No-Scalpel Vasectomy among the teachers.
- Section – III : Assessment of attitude on No-Scalpel Vasectomy among the teachers.
- Section – IV : Correlation coefficient between knowledge and attitude of No-Scalpel Vasectomy.

- Section – V : Association between level of knowledge on No-Scalpel  
Vasectomy and demographic variables among the teachers.
- Section – VI : Association between Level of attitude on No-Scalpel  
Vasectomy and demographic variables among the  
teachers.

## Section – I

**Table 2:      Distribution of demographic variables among the teachers** **n=100**

<b>Demographic Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>1. Age in years</b>		
a) 21–30 Years	24	24.0
b) 31–40 Years	32	32.0
c) 41–50 Years	24	24.0
d) >50 Years	20	20.0
<b>2. Type of family</b>		
a) Nuclear	45	45.0
b) Joint	55	55.0
<b>3. Religion</b>		
a) Hindu	63	63.0
b) Christian	28	28.0
c) Muslim	7	7.0
d) Others	2	2.0
<b>4. Educational status</b>		
a) Undergraduate	16	16.0
b) Postgraduate	83	83.0
c) Doctorate	1	1.0
<b>5. Training</b>		
a) Diploma in Education	5	5.0
b) Bachelor in Education	26	26.0
c) Masters in Education	69	69.0

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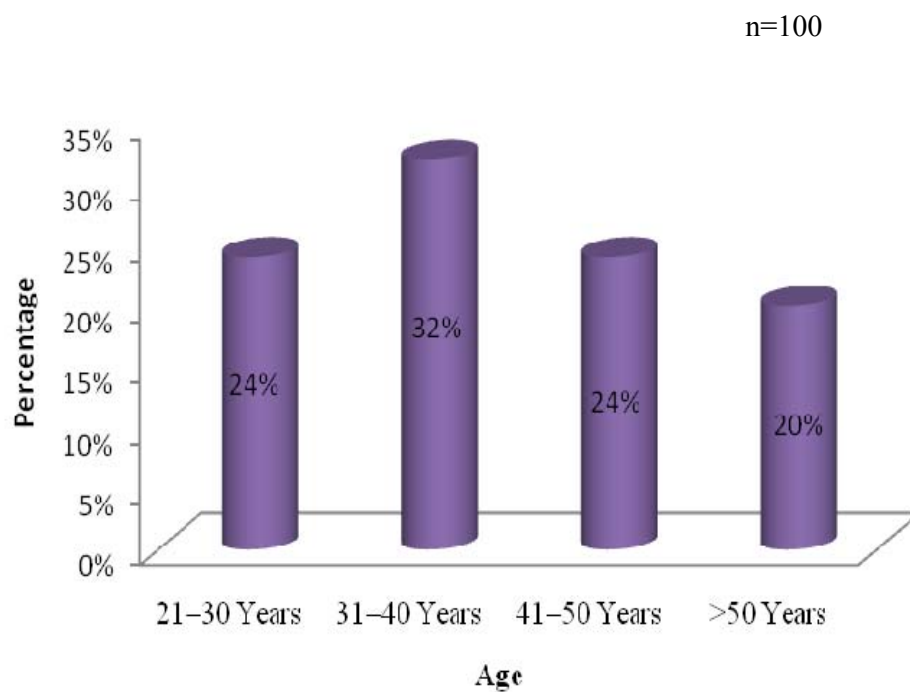
<b>6. Monthly Income</b>		
a) Rs. 5000–10000	14	14.0
b) Rs. 10000–15000	18	18.0
c) >Rs. 15000	68	68.0
<b>7. No. of Living Children</b>		
a) One	30	30.0
b) Two	55	55.0
c) Three	15	15.0
d) More than three	0	0.0
<b>8. Family adopted Vasectomy</b>		
a) Yes	17	17.0
b) No	83	83.0
<b>8a. If yes, Outcome</b>		
a) Healthy	15	88.2
b) Unhealthy	2	11.8
<b>9. Aware of No-Scalpel Vasectomy</b>		
a) Yes	44	44.0
b) No	56	56.0
<b>9a. If yes, Source</b>		
a) Health Magazines	8	18.6
b) Mass Media	8	18.6
c) Health Personnel	17	38.6
d) Friends/Relatives	6	14.0
e) Others	5	11.6

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<b>10. Adopted any Method of FP</b>		
a) Yes	48	48.0
b) No	52	52.0
<b>10a. If yes, Which Method</b>		
a) Condom	40	81.6
b) Abstinence	6	12.5
c) Coitus Interruptus	2	4.1

The Table 2 shows that 32% (32) of the school teachers were belonged to the age group 31–40 years, 55% (55) of them were from joint family, 63% (63) of them were belonged to Hindu religion, 83% (83) of the them were postgraduate, (69%) 69 of them were underwent Master in Education training, 68% (68) of them had monthly income of >Rs.15,000, 55% (55) of them had two children, 83% (83) of them were not adopted Vasectomy, 56% (56) of them were not aware of No-Scalpel Vasectomy, 52% (52) of them were not adopted any method of family planning.

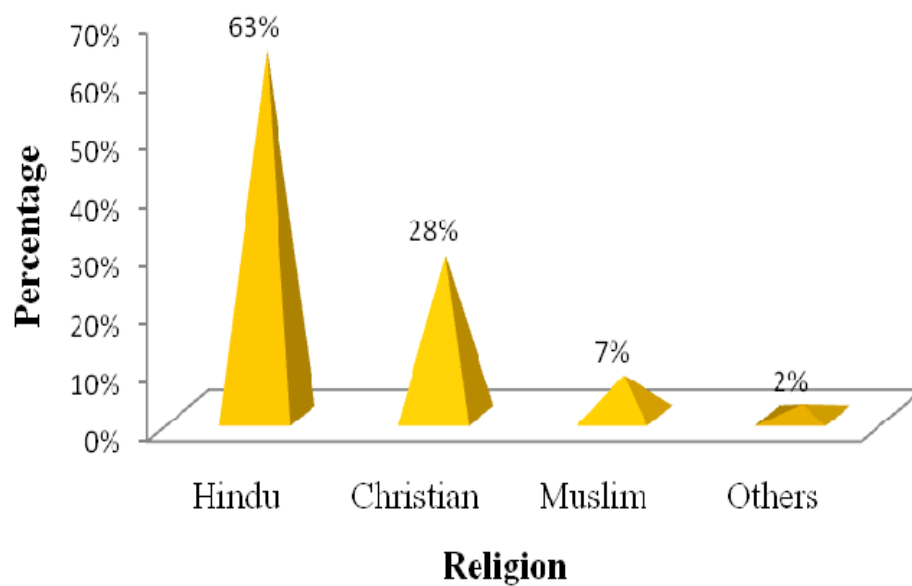
**Figure 2: Distribution of age among the teachers**



The Figure 2 shows that 32% (32) of the teachers were belonged to the age group of 30–40 years, 24% (24) were belonged to the age group of 21–30 years and 41–50 years and 20% (20) were belonged to the age group of above 50 years.

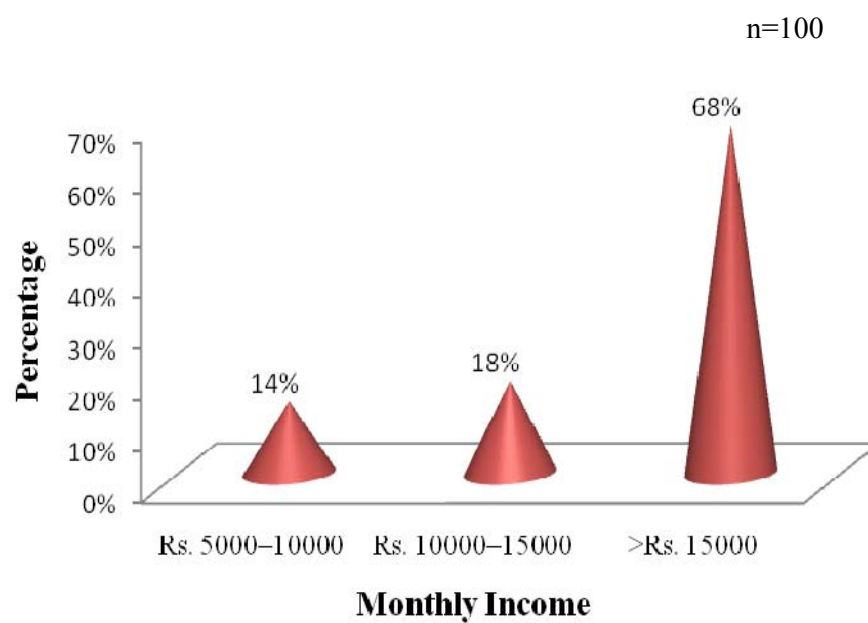
**Figure 3: Distribution of religion among the teachers**

n=100



The Figure 3 shows that most of the Teachers 63% (63) were belonged to Hindus religion, 28% (28) were belonged to Christian religion, 7% (7) were belonged to Muslim religion and 2% (2) were others.

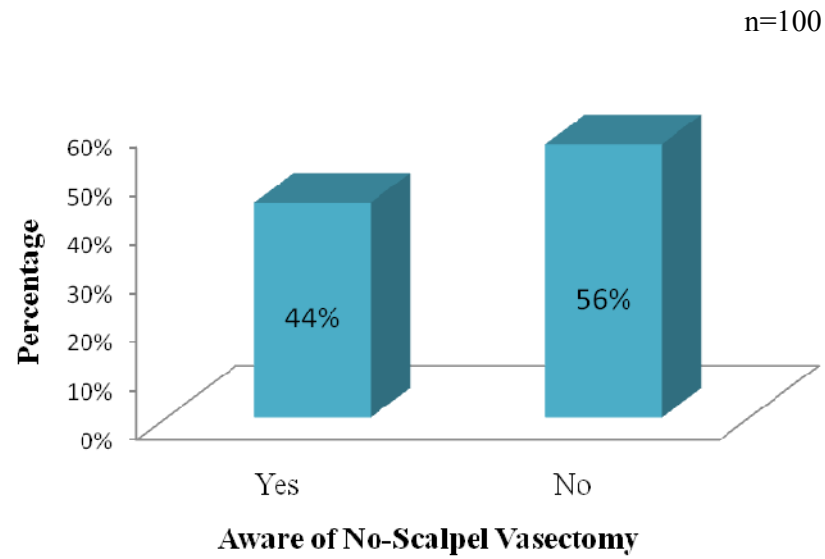
**Figure 4:      Distribution of monthly income among the teachers**



The Figure 4 shows that (14) 14% of teachers have monthly income were Rs. 5000–10,000, (18) 18% of teachers have monthly income were Rs. 10,000–15,000 and above 68% (68) of them have monthly income were above Rs. 15,000.



**Figure 5: Distribution of aware of No-Scalpel Vasectomy among the teachers**



The Figure 5 shows that 44% (44) of the teachers were aware of No-Scalpel Vasectomy and 56% (56) of the teachers were not aware of No-Scalpel Vasectomy.

## Section – II

**Table 3: Mean and standard deviation value of overall knowledge on No-Scalpel Vasectomy among the teachers**

**n=100**

<b>Knowledge Aspects</b>	<b>Mean</b>	<b>Standard Deviation</b>
Family Welfare Method	49.75	27.18
Advance Technique on No-Scalpel Vasectomy	35.37	17.59
Health Service on No-Scalpel Vasectomy	35.33	29.14
Overall Knowledge on No-Scalpel Vasectomy	39.20	15.02

The Table 3 reveals that overall knowledge on No-Scalpel Vasectomy mean value = 39.20, standard deviation = 15.02.

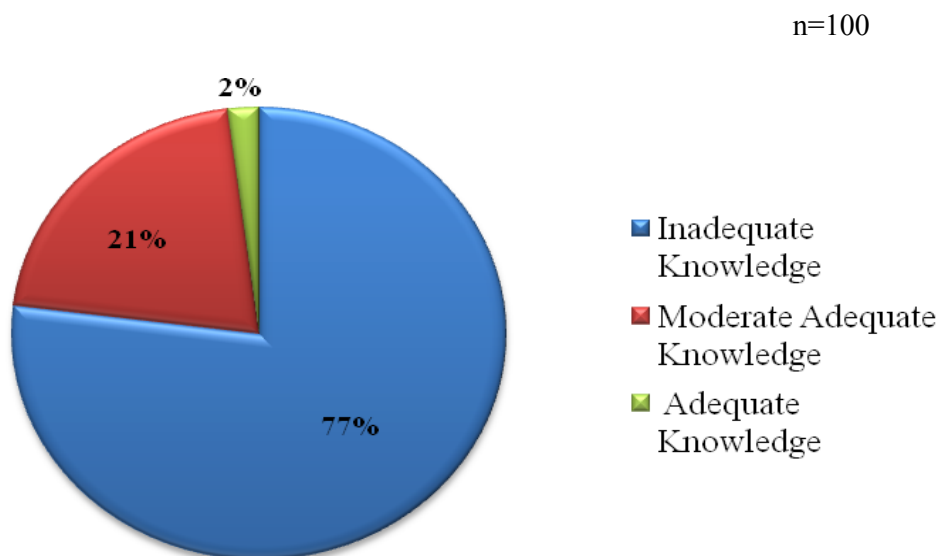
**Table 4: Distribution of level of knowledge on No-Scalpel Vasectomy among the teachers**

<b>n=100</b>			
<b>Knowledge Aspects</b>	<b>Inadequate Knowledge</b>	<b>Moderately Adequate Knowledge</b>	<b>Adequate Knowledge</b>
Family Welfare Method	34	31	35
Advance Technique on No-Scalpel Vasectomy	74	22	4
Health Service on No-Scalpel Vasectomy	65	32	3
Overall Knowledge on No-Scalpel Vasectomy	77	21	2

The Table 4 shows that 34% (34) of the school teachers had inadequate knowledge on family welfare method, 31% (31) of them had moderate adequate knowledge on family welfare method and 35% (35) of them had adequate knowledge on family welfare method. 74% (74) of the school teachers had inadequate knowledge on Advance Technique on No-Scalpel Vasectomy, 22% (22) of them had Moderately Adequate Knowledge on Advance Technique on No-Scalpel Vasectomy and 4% (4)

of them had Adequate Knowledge on Advance Technique on No-Scalpel Vasectomy. 65% (65) of the school teachers had inadequate knowledge on Health Service on No-Scalpel Vasectomy, 32% (32) of them had moderate adequate knowledge on Health Service on No-Scalpel Vasectomy and 3% (3) of them had adequate knowledge on Health Service on No-Scalpel Vasectomy. 77% (77) of the school teachers had inadequate knowledge on overall knowledge on No-Scalpel Vasectomy, 21% (21) of them had moderate adequate knowledge on overall knowledge on No-Scalpel Vasectomy and 2% (2) of them had adequate knowledge on overall knowledge on No-Scalpel Vasectomy.

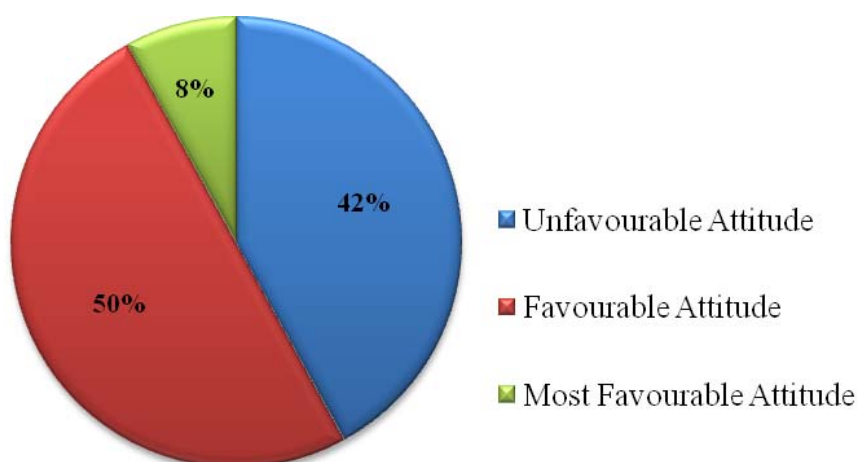
**Figure 6: Distribution of Level of Knowledge on No-Scalpel Vasectomy among the Teachers**



The Figure 6 shows that 2% (2) of the school teachers had adequate knowledge on No-Scalpel Vasectomy, 21% (21) of them had moderate adequate knowledge on No-Scalpel Vasectomy and 77% (77) of them had inadequate knowledge on No-Scalpel Vasectomy.

**Figure 7: Distribution of level of attitude on No-Scalpel Vasectomy among the teachers**

n=100



The Figure 7 shows that 8% (8) of the school teachers had most favourable attitude on No-Scalpel Vasectomy, 50% (50) of them had favourable attitude on No-Scalpel Vasectomy and 42% (42) of them had unfavourable attitude on No-Scalpel Vasectomy.

### Section – III

**Table 5: Mean and standard deviation value of overall attitude score on No-Scalpel Vasectomy among the teachers**

n=100	
Descriptive Statistics	Attitude Score
Mean	55.55
Standard Deviation	13.48
Range:	
Minimum Score	30.0
Maximum Score	82.5

The Table 5 reveals that overall knowledge on No-Scalpel Vasectomy mean value = 55.55, standard deviation = 3.48.

#### Section – IV

**Table 6: Correlation coefficient between knowledge and attitude score on No-Scalpel Vasectomy among the teachers**

n=100	
Knowledge	Attitude
r = value	0.741
p – value	p<0.001 (Significant)

The Table 6 indicates a positive correlation existed between knowledge and Attitude on No-Scalpel Vasectomy. The correlation was found statistically significant at the level of  $p<0.05$ .



## Section – V

**Table 7: Association between level of knowledge on No-Scalpel Vasectomy and demographic variables among the teachers**

					n=100
Demographic Variables	Inadequate Knowledge		Moderate adequate Knowledge		Chi square test and P value
	No	%	No	%	
1. Age in Years					
a) 21–30 Years	21	87.5	3	12.5	$\chi^2 = 3.821$ ,
b) 31–40 Years	26	81.3	6	18.8	D.F.= 3
c) 41–50 Years	16	66.7	8	33.3	P=0.281 (N.S)
d) >50 Years	14	70.0	6	30.0	
2. Type of Family					
a) Nuclear	31	68.9	14	31.1	$\chi^2 = 30.039$ ,
b) Joint	46	83.6	9	16.4	D.F.= 1
					P=0.081 (N.S)
3. Religion					
a) Hindu	51	81.0	12	19.0	$\chi^2 = 7.437$ ,
b) Christian	17	60.7	11	39.3	D.F.= 3
c) Muslim	7	100.0	0	0.0	P=0.050 *
d) Others	2	100.0	0	0.0	
4. Educational status					
a) Undergraduate	15	93.8	1	6.3	$\chi^2 = 3.410$ ,
b) Postgraduate	61	73.5	22	26.5	D.F.= 2
c) Doctorate	1	100.0	0	0.0	P=0.182 (N.S)

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**5. Training**

a) Diploma in Education	5	100.0	0	0.0	$\chi^2 = 2.442$ ,
b) Bachelor in Education	18	69.2	8	30.8	D.F.= 2
c) Masters in Education	54	78.3	15	21.7	P=0.295 (N.S)

**6. Monthly Income**

a) Rs. 5000–10000	10	71.4	4	28.6	$\chi^2 = 1.836$ ,
b) Rs. 10000–15000	16	88.9	2	11.1	D.F.= 2
c) >Rs. 15000	51	75.0	17	25.0	P=0.399 (N.S)

**7. No. of Living Children**

a) One	24	80.0	6	20.0	$\chi^2 = 0.279$ ,
b) Two	42	76.4	13	23.6	D.F.= 2
c) Three	11	73.3	4	26.7	P=0.870 (N.S)

**8. Family adopted****Vasectomy**

					$\chi^2 = 0.331$ ,
a) Yes	14	82.4	3	17.6	D.F.= 1
b) No	63	75.9	20	24.1	P=0.565 (N.S)

**8a. If yes, Outcome**

					$\chi^2 = 0.486$ ,
a) Healthy	12	80.0	3	20.0	D.F.= 1
b) Unhealthy	2	100.0	0	0.0	P=0.486 (N.S)

**9. Aware of No-Scalpel****Vasectomy**

					$\chi^2 = 1.030$ ,
a) Yes	36	81.8	8	18.2	D.F.= 1
b) No	41	73.2	15	26.8	P=0.310 (N.S)

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<b>9a. If yes, Source</b>					
a) Health Magazines	7	87.5	1	12.5	$\chi^2 = 4.912$ ,
b) Mass Media	7	87.5	1	12.5	D.F.= 4
c) Health Personnel	15	88.2	2	11.8	P=0.296 (N.S)
d) Friends/Relatives	3	50.0	3	50.0	
e) Others	4	80.0	1	20.0	
<b>10. Adopted any method of FP</b>					
					$\chi^2 = 0.00$ ,
a) Yes	37	77.1	11	22.9	D.F.= 1
b) No	40	76.9	12	23.1	P=0.985 (N.S)
<b>10a. If yes, Which Method</b>					
a) Condom	30	75.0	10	25.0	$\chi^2 = 0.826$
b) Abstinence	5	83.3	1	16	D.F.= 2
c) Coitus Interruptus	2	100.0	0	0.0	P=0.662 (N.S)

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Note: \* - P<0.05 Level of significant, N.S. – Not Significant

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The Table 7 shows that significant association between level of knowledge with Religion on No-Scalpel Vasectomy. There was a no significant association between level of knowledge with age, type of family, educational status, training, family/friends adopted vasectomy outcome, heard of No-Scalpel Vasectomy about sources and adopted method of family planning

## Section – VI

**Table 8: Association between level of attitude on No-Scalpel Vasectomy and demographic variables among the teachers**

Demographic Variables	n=100						
	Poor Attitude		Moderate Attitude		Good Attitude		Chi square test and P value
	No	%	No	%	No	%	
1. Age in Years							
a) 21–30 Years	16	66.7	6	25.0	2	8.3	$\chi^2 = 15.625$ ,
b) 31–40 Years	15	46.9	15	46.9	2	6.3	D.F.= 6
c) 41–50 Years	9	37.5	13	54.2	2	8.3	P=0.016 *
d) >50 Years	2	10.0	16	80.0	2	10.2	
2. Type of Family							
a) Nuclear	14	31.1	28	62.2	3	6.7	$\chi^2 = 4.936$ , D.F.= 2
b) Joint	28	50.1	22	40.0	5	9.1	P=0.085 (N.S)
3. Religion							
a) Hindu	28	44.4	31	49.2	4	6.3	$\chi^2 = 4.448$ ,
b) Christian	11	39.3	13	46.4	4	14.3	D.F.= 6
c) Muslim	3	42.9	4	57.1	0	0.0	P=0.616 (N.S)
d) Others	0	0.0	2	100.0	0	0.0	
4. Educational status							
a) Undergraduate	8	50.0	8	50.0	0	00	$\chi^2 = 1.814$ , D.F.= 2
b) Postgraduate	34	40.5	42	50.0	8	9.5	P=0.404 (N.S)

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**5. Training**

a) Diploma in Education	3	60.0	2	40.0	0	0.0	$\chi^2 = 2.294$ ,
b) Bachelor in Education	10	38.5	15	57.7	1	3.8	D.F.= 4
c) Masters in Education	29	42.0	33	47.8	7	10.1	P=0.682 (N.S)

**6. Monthly Income**

a) Rs. 5000–10000	6	42.9	5	35.7	3	21.4	$\chi^2 = 13.461$ ,
b) Rs. 10000–15000	13	72.2	4	22.2	1	5.6	D.F.= 4
c) >Rs. 15000	23	33.8	41	60.3	4	5.9	P=0.009 **

**7. No. of Living Children**

a) One	11	36.7	16	53.3	3	10.0	$\chi^2 = 1.258$ ,
b) Two	23	41.8	28	50.9	4	7.3	D.F.= 4
c) Three	8	53.3	6	40.0	1	6.7	P=0.868 (N.S)

**8. Family adopted Vasectomy**

							$\chi^2 = 0.402$ ,
a) Yes	7	41.2	8	47.1	2	11.8	D.F.= 2
b) No	35	42.2	42	50.6	6	7.2	P=0.818 (N.S)

**8a. If yes, Outcome**

							$\chi^2 = 3.238$ ,
a) Healthy	5	33.3	8	53.3	2	13.3	D.F.= 2
b) Unhealthy	2	100.0	0	0.0	0	0.0	P=0.198 (N.S)

**9. Aware of No-Scalpel****Vasectomy**

							$\chi^2 = 1.323$ ,
a) Yes	17	38.6	22	50.0	5	11.4	D.F.= 2
b) No	25	44.6	28	50.0	3	5.4	P=0.516 *

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**9a. If yes, Source**

a) Health Magazines	2	25.0	6	75.0	0	0.0	$\chi^2 = 10.505$ ,
b) Mass Media	4	50.0	2	25.0	2	25.0	D.F.= 8
c) Health Personnel	8	47.1	8	47.1	1	5.9	P=0.231 (N.S)
d) Friends/Relatives	2	33.3	2	33.3	2	33.3	
e) Others	1	20.0	4	80.0	0	0.0	

**10. Adopted any Method of FP** $\chi^2 = 1.687$ ,

a) Yes	17	35.4	27	56.3	4	8.3	D.F.= 2
b) No	25	48.1	23	44.2	4	7.7	P=0.430 (N.S)

**10a. If yes, Which Method**

a) Condom	14	35.0	23	57.5	3	7.5	$\chi^2 = 3.022$ ,
b) Abstinence	3	50.0	2	33.3	1	16.7	D.F.= 4
c) Coitus Interruptus	0	0.0	2	100.0	0	0.0	P=0.554 (N.S)

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Note: \* -  $P < 0.05$ , \*\* -  $P < 0.01$  Level of significant, N.S. – Not Significant

The Table 8 reveals that significant association between level of attitude with age, monthly income, aware of No-Scalpel Vasectomy. There was a no significant association between level of attitude with religion, type of family, educational status, training, family/friends adopted vasectomy outcome and adopted method of family planning.

## CHAPTER V

### DISCUSSION

A descriptive study was conducted to assess the knowledge and attitude on No-Scalpel Vasectomy among the teachers. The samples were selected by convenient sampling technique and their level of knowledge was assessed by a structured questionnaire. The study was conducted at Government Higher Secondary Schools, Chennai. The results of the study have been discussed based on the objectives stated for the study.

Table 2 shows that 32% (32) of the school teachers belonged to the age group of 31–40 years, 55% (55) of them were from the joint families, 63% (63) of them belonged to the Hindu religion and 83% (83) of them were postgraduates. The table also reveals that 69% (69) of the school teachers underwent Master in Education training, 68% (68) of them had a monthly income of >Rs.15,000, 55% (55) of them had two children, 83% (83) of them did not adopt to Vasectomy, 56% (56) of them were not aware of No-Scalpel Vasectomy and 52% (52) of them did not adopt to any method of family planning.

**The first objective of the study was to assess the level of knowledge and attitude regarding No-Scalpel Vasectomy among teachers.**

The Figure 6 shows the level of knowledge on No-Scalpel Vasectomy. The figure reveals 2% of the teachers had adequate knowledge, 21% of the teachers had moderate knowledge and 77% of the teachers had inadequate knowledge regarding No-Scalpel Vasectomy.

The Figure 7 shows that 8% of the teachers had most favourable attitude, 50% of the teachers had favourable attitude and the remaining 42% of the teachers had unfavourable attitude regarding No-Scalpel Vasectomy.

The following findings of the studies were consistent with the study conducted by Dr. Nagarajappa, (2002) which assessed the study on knowledge of the married men on No-Scalpel Vasectomy in Bangalore. The findings revealed that married men had inadequate knowledge on “No-Scalpel Vasectomy”.

Tavakoli R, et al (2005) conducted a study on knowledge and attitudes towards family planning by male teachers in the Islamic Republic of Iran. This study revealed that 65% of the study population had inadequate knowledge regarding family planning programmes and 50% of the respondents reported unfavourable attitude towards the implementation of family planning programmes.

So, this study results reveals that school teachers were not having adequate knowledge and favourable attitude regarding No-Scalpel Vasectomy.

Modified Leninger’s Culture Care Diversity Model was used as the conceptual framework in this study which focused on the transformation of knowledge and attitude to the teachers on No-Scalpel Vasectomy.

The researcher suggests that a proper educational programme will improve the knowledge and attitude on No-Scalpel Vasectomy.

**The second objective of the study was to correlate the knowledge and attitude of teacher regarding No-Scalpel Vasectomy.**

Table 7 shows that the calculated r value is 0.741 which shows a positive correlation existed between knowledge and attitude at the level of  $p < 0.001$ . The study



clearly reveals that when the level of knowledge decreases the attitude towards No-Scalpel Vasectomy also decreased.

The following finding of the study was consistent with the study conducted by Oduy OO, (2006) which is a cross-sectional study to determine men's knowledge and attitude to family planning at Ganmo, a sub-urban community on the outskirts of Ilorin, Nigeria. The study employed an interviewer who has administered a semi-structured questionnaire to elicit information from 360 men in the households. Only males above the age of 15 years and residents in the community were selected for the interview. Nearly all the men (96.5%) were aware of the family planning methods and a majority of them were aware of some common methods of family planning method e.g. Oral Contraceptive Pills (OCPs) (72.5%), Injectables (69.2%), Condoms (86.6%) and Traditional methods (70.6%). Knowledge of other alternative female methods was low e.g. Norplant (17.5%), IUCD (26.3%), Diaphragm (39.8%), Vaginal cream (30.2%), Vaginal tablet (37.8%) and Vaginal sponge (16.8%), and Tubal Ligation (51.3%). Knowledge of male controlled family planning methods like Withdrawal (49.6%), Rhythm or periodic abstinence (54.6%) and Vasectomy (28.6%) was also poor. The finding revealed that men had limited knowledge and unfavourable attitude towards Vasectomy. This study shows positive correlation between the level of knowledge and attitude regarding Vasectomy.

**The third objective of the study was to associate the level of knowledge and attitude regarding No-Scalpel Vasectomy with selected demographic variables.**

The Table 7 shows there was a significant association of knowledge with demographic variables like religion which was significant at the level of  $p < 0.05$ . The

results showed that there was no significant association of knowledge with age, type of family, educational status, training, family/friends adopted vasectomy outcome, aware of No-Scalpel Vasectomy about sources and adopted method of family planning.

The Table 8 shows that there was a significant association of attitude with demographic variables like monthly income which was significant at the level of  $p < 0.01$ . There was also a significant association between attitude and demographic variables like age and aware of No-Scalpel Vasectomy which was significant at the level of  $p < 0.05$ . There was no significant association of attitude with, type of family, educational status, training, family/friends adopted vasectomy outcome, and adopted method of family planning.

Hence, the researcher recommends the utilization of different approaches through the Information Education Communication (IEC) packages to create awareness among the male folk of the community.

## **CHAPTER VI**

### **SUMMARY, CONCLUSION, LIMITATIONS, IMPLICATIONS AND RECOMMENDATION**

This chapter presents the summary and conclusion of the study, the implication for nursing practice and recommendations for further study.

#### **Summary**

The focus of the study was to assess the knowledge and attitude on No-Scalpel Vasectomy among the teachers who are working in Government Higher Secondary Schools in Chennai.

#### **Objectives**

- To assess the level of knowledge and attitude regarding No-Scalpel Vasectomy among teachers.
- To correlate the knowledge and attitude of teacher regarding No-Scalpel Vasectomy.
- To associate the level of knowledge and attitude regarding No-Scalpel Vasectomy with selected demographic variables.

#### **Assumption**

- No-Scalpel Vasectomy is a safe and effective contraceptive method.
- Teachers have less knowledge on No-Scalpel Vasectomy as a permanent contraceptive method among men.

- Providing adequate knowledge and attitude, promotes awareness about No-Scalpel Vasectomy.

### **Conceptual Framework**

The conceptual framework was based on the Modified Model of Leninger's Culture Care Diversity Model.

### **Research Design**

A descriptive design was adopted for the study.

### **Major Study Findings**

The demographic characteristics revealed that 32% (32) of the school teachers belonged to the age group of 31–40 years, 55% (55) of them were from the joint families, 63% (63) of them belonged to the Hindu religion and 83% (83) of the them were postgraduates. The table also reveals that 69% (69) of the school teachers underwent Master in Education training, 68% (68) of them had a monthly income of >Rs.15,000, 55% (55) of them had two children, 83% (83) of them did not adopt to Vasectomy, 56% (56) of them were not aware of No-Scalpel Vasectomy and 52% (52) of them did not adopt to any method of family planning.

It was also noted that the overall knowledge mean score was 39.20 with a standard deviation of 15.02. The result revealed that (21%) 21 had moderately adequate knowledge and (77%) 77 had inadequate knowledge.

It was also noted that overall mean score of attitude was 55.55 with standard deviation of 13.48 and (50%) 50 of them had favourable attitude (42%) 42 had unfavourable attitude on No-Scalpel Vasectomy among teachers.

It revealed that positive correlation existed between knowledge and attitude on No-Scalpel Vasectomy among teachers. The correlation was found statistically significant at the level of  $p < 0.05$ . Hence, as the level of knowledge decreases the level of attitude also were unfavourable.

It was also noted that there was significant association between level of knowledge with religion which is significant at the level of  $p < 0.05$ . There was a no significant association between level of knowledge with age, type of family, educational status, training, family/friends adopted Vasectomy outcome, aware of No-Scalpel Vasectomy about sources and adopted method of family planning at the level of  $p > 0.05$ .

It was also noted that there was a significant association between attitude with demographic variables like monthly income which is significant at the level of  $p < 0.01$  level. Also there was a significant association between attitude and demographic variables like age and aware of No-Scalpel Vasectomy which is significant at the level of  $p < 0.05$ . There was a no significant association between attitude and demographic variables like type of family, educational status, training, family/friends adopted vasectomy outcome, and adopted method of family planning at the level of  $p > 0.05$   $p > 0.01$ .

## **Conclusion**

The finding of the study revealed that majority of the teachers i.e. (77%) 77 of them had inadequate knowledge, (21%) 21 of them had moderate adequate knowledge and (2%) 2 of them had adequate knowledge. (42%) 42 of the teachers had unfavourable attitude, (50%) 50 of the teachers had unfavourable attitude and (8%) 8 of the teachers had most favourable attitude. So the Community Health Nurse should be aware of the need for educating the community on No-Scalpel Vasectomy among school teachers, this will help to provide adequate information to urban and rural people.

## **Limitations**

- The study was limited to teachers with minimum of undergraduate qualification.
- The study was limited to 6 weeks.

## **Nursing Implications**

- Community nurses need to take up the responsibility to create awareness among the school teachers regarding No-Scalpel Vasectomy.
- Nurses should organize Health Education campaign for the community about practice on No-Scalpel Vasectomy in School Teachers.

## **Nursing Education**

- The Nurse Educator can always play a major role by planning and giving inputs for the in service education programme (seminars, workshops) for nurses regarding No-Scalpel Vasectomy and its practice.

- The nurse educator should emphasize on health education of No-Scalpel Vasectomy and its practice as a part of learning experience for students.

### **Nursing Research**

- This study will be a motivation for budding researches to conduct similar studies on a large scale.
- Evidence based Nursing practice must take higher profile in order to increase the awareness among the men on No-Scalpel Vasectomy.
- It emphasizes many research work that need to be conducted relating to the problem of No-Scalpel Vasectomy and practice of No-Scalpel Vasectomy which could provide current information on No-Scalpel Vasectomy.

### **Nursing Administration**

- The Nurse Administrators should ensure that periodical refreshers courses on No-Scalpel Vasectomy to be conducted.
- The Nurse Administrators must make sure that education and informational material should have consistent information which can be displayed in primary Health Center.

### **Recommendations**

Based on the findings of the present study the following recommendations are made:

- An experimental study can be conducted with a structured teaching programme on No-Scalpel Vasectomy.

- A similar study can be done by using audio and video aids.
- A comparative study between knowledge and attitude of urban and rural men on No-Scalpel Vasectomy can be conducted.



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## APPENDIX-A

### Letter seeking permission to conduct the study

Chennai  
01.04.11

**From**  
Subakeerthi.V  
II<sup>nd</sup> Year M.Sc. Nursing,  
MIOT College of Nursing,  
Chennai

**Forwarded through**  
Prof. Mrs. S. Ani Grace Kalaimathi M.Sc. (Nursing) PhD,  
Principal,  
MIOT College of Nursing,  
Chennai

**To**  
The Chief Education Officer  
Panagal Building  
Anna Salai  
Saidapet  
Chennai - 15

**Subject:** - Requesting permission to conduct research in Government Schools.

Respected Sir/Madam,

As a part of M.Sc. (N) requirement under the fulfillment of Tamil Nadu Dr. M.G.R. Medical University, I am conducting a research on "A study to assess the knowledge and attitude on no scalpel vasectomy among teachers at selected schools in Chennai". Kindly I request you to permit me to do my study in Government schools.

Thanking you,

Yours' Sincerely,

*V. Subakeerthi.*  
Subakeerthi.V

*Forwarded  
Ani Grace  
1/6/2011*

Prof. Mrs. ANIGRACE KALAIMATHI  
M.Sc., (N), PGDNA., DQA, Ph.D.,  
Principal,  
MIOT COLLEGE OF NURSING  
No. 1/70, Mariamman Koll Street,  
Mugaliyakkam, Chennai - 600 116.

*சென்னை மாநகராட்சி*

*A. Srinivasan*  
Chief Educational Officer  
Chennai-600 015  
*1/6/2011*

## APPENDIX-B

### Informed consent form

I am V. Subakeerthi, M.Sc. Nursing II Year student at MIOT College of Nursing, Chennai.

I am giving my consent to participate research study that **“A Study to Assess the Knowledge and Attitude on No-Scalpel Vasectomy among the Teachers at Selected Government Higher Secondary Schools in Chennai”** The study will help me to become aware of No-Scalpel Vasectomy among the teachers I understand that, I will have thorough knowledge of No-Scalpel Vasectomy.

I have been informed that my participation is entirely voluntary and that even after the study begins, I can refuse to answer to participate at any point of time during the study, I have been fully informed about the nature of the study, the researcher's responsibilities and likely benefits that would be used.

I hereby seek your consent and appear to participate in the study. Please be frank and honest in your response. The information collected will be kept confidently and anonymity will be maintained.

Signature of the Investigator

I \_\_\_\_\_ hereby consent to participate and undergo the study.

Date:

Place:

Signature of the Participant

## **APPENDIX–C**

### **Structured questionnaire schedule**

#### **Section I: Demographic Variables:**

1. Age
  - a. 21–30 Years
  - b. 31–40 Years
  - c. 41–50 Years
  - d. Above 50 years ( )
  
2. Type of family
  - a. Joint family
  - b. Nuclear family ( )
  
3. Religion
  - a. Hindu
  - b. Christian
  - c. Muslim
  - d. Others ( )
  
4. Educational Status
  - a. Undergraduate
  - b. Postgraduate
  - c. Doctorate ( )
  
5. Training
  - a. Diploma in Education
  - b. Bachelor in Education
  - c. Master in Education ( )



6. Monthly income
- a. Rs. 5,000 to 10,000
  - b. Rs. 10,000 to 15,000
  - c. Above Rs.15,000 ( )

7. Number of living children
- a. One
  - b. Two
  - c. Three
  - d. More than three ( )

8. Any members of your family/friends adopted vasectomy?
- a. Yes
  - b. No ( )

If yes outcome of the vasectomy,

- a. Healthy
- b. Unhealthy ( )

9. Have you aware of No-Scalpel Vasectomy?
- a. Yes
  - b. No ( )

If yes, source of information?

- a. Health Magazines
- b. Mass Media
- c. Health Personnel
- d. Friends/Relatives
- e. Others ( )

10. Have you adopted any Method of Family Planning at any time?

a. Yes

b. No ( )

If yes which Method,

a. Condom

b. Abstinence

c. Coitus Interruptus ( )

## **Section II:**

### **I. Knowledge on Family Welfare Method**

1. What do you mean by Family Welfare Method?

a. Preventing disease among family members

b. Promoting health and welfare of the family group

c. Improper spacing between pregnancy

d. Maintaining the economic status of the family ( )

2. What are the different types of Family Welfare Method?

a. Temporary methods

b. Permanent methods

c. Both

d. Don't know ( )

3. Permanent method of Family Planning Adopted by men is:

a. Tubectomy

b. Vasectomy

c. Prostatectomy

d. Orchiectomy ( )

4. What is the meaning of Vasectomy?

Vasectomy is

- a. The ligation of the vas deference
- b. The ligation and transaction of the part of the vas deference
- c. The transaction of the vas deference
- d. The removal of testes

( )

## **II. Knowledge on Advance Technique (No-Scalpel Vasectomy)**

1. What do you mean by No-Scalpel Vasectomy?

- a. Traditional method of vasectomy
- b. Temporary contraceptive method
- c. No scalpel, modern surgical technique of family planning for men
- d. Don't know

( )

2. What is the criteria to undergo No-Scalpel Vasectomy?

- a. 1 live child
- b. 2 live children
- c. 3 live children
- d. More than 3 live children

( )

3. What is the Advantage of No-Scalpel Vasectomy?

- a. No wound, no incision, No scar and no hospital stay
- b. 90% protection
- c. Irreversible
- d. Safe and effective

( )

4. How many days of hospitalization required for No-Scalpel Vasectomy?

- a. 1 day
- b. 2 days
- c. 3 days
- d. Not required

( )

5. When will men resume normal activity after No-Scalpel Vasectomy?
- a. Immediately after vasectomy
  - b. Within 1 day
  - c. Within 5 days
  - d. Within 1 week ( )
6. What will be the effect on sexual performance of the men after No-Scalpel Vasectomy?
- a. Increased
  - b. Decreased
  - c. Same as before
  - d. Not present ( )
7. How long condom should be used after No-Scalpel Vasectomy?
- a. Two months
  - b. Three months
  - c. Till the lab examination of semen shows negative sperm on three consecutive test
  - d. Four months ( )
8. Whom will you approach for the direction or information about No-Scalpel Vasectomy?
- a. Only health personnel
  - b. Those who undergone vasectomy
  - c. Friends
  - d. Relatives ( )

### **III. Knowledge on Health Services**

1. Where is No-Scalpel Vasectomy done?
- a. Only at authorized private hospitals
  - b. Only at family welfare centers

- c. Only at Government hospitals
  - d. Government hospitals, private hospitals and family welfare centers ( )
2. What is the cost of No-Scalpel Vasectomy?
- a. Very expensive
  - b. Less expensive
  - c. Free of cost and incentives available
  - d. Don't know ( )
3. What is the Government monetary benefit for a person who has undergone vasectomy?
- a. Rs. 600
  - b. Rs. 500
  - c. Rs. 1300
  - d. Rs. 1000 ( )

### Section–III

#### Likert scale for assessing attitude

S.No.	Statements	SA 4	A 3	D 2	SDA 1	U 0
1.	No-Scalpel Vasectomy is acceptable in our culture					
2.	I feel No-Scalpel Vasectomy services are available at nearby health centers					
3.	I feel No-Scalpel Vasectomy causes illness					
4.	I think No-Scalpel Vasectomy doesn't lower the ability to continue the job or work					
5.	I frighten No-Scalpel Vasectomy causes lack of sexual pleasure and impotence					
6.	I think No-Scalpel Vasectomy causes pain					
7.	I feel No-Scalpel Vasectomy causes low self esteem					
8.	I feel No-Scalpel Vasectomy is a failure method of family planning due to no stitches					
9.	I am in favour of No-Scalpel Vasectomy as a method of permanent family planning					
10.	I am interested to talk about the advantages of No-Scalpel Vasectomy to my friends and relatives					

Key: SA – Strongly Agree; A – Agree; D – Disagree; SD – Strongly Disagree;  
U – Uncertain

## **APPENDIX–D**

### **Information booklet**

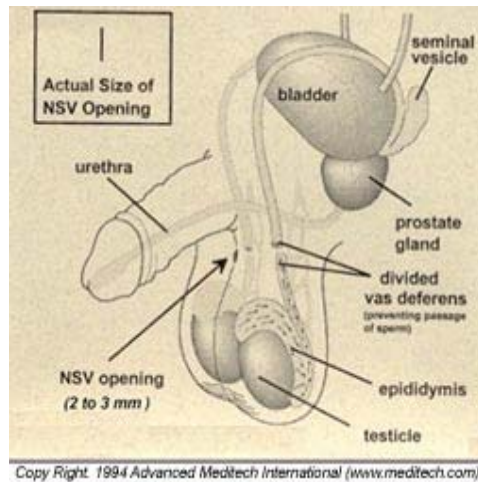
#### **NO-SCALPEL VASECTOMY**

##### **What is a Vasectomy?**

Vasectomy is the surgical interruption of the two tubes (vas deferens) that carry a man's sperm from his testicles to his ejaculatory ducts, where the sperm are stored before departure from his body during orgasm. Vasectomy prevents sperm from being added to the man's ejaculation fluid (semen); therefore, he can no longer make a woman pregnant. The sperm containing fluid that is blocked by vasectomy constitutes only 3% of a man's semen volume; therefore, a man will not notice any changes in his semen. Vasectomy is simply an effective, inexpensive, easy-to-perform method of contraception. Over 500,000 men in North America choose vasectomy each year.

##### **What is the No-Scalpel Vasectomy?**

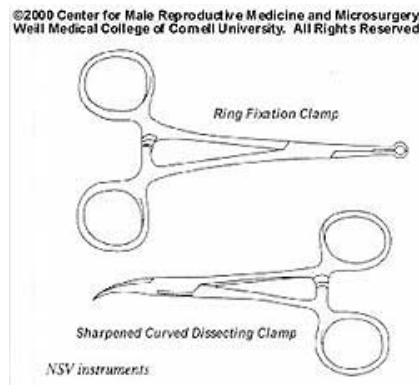
It is a safe minimally invasive procedure that reduces vasectomy's already low complication rate. The No-Scalpel Vasectomy was developed in China by Dr. Li Shun-Qiang in 1974 and introduced to the western world by AVSC International and Dr. Marc Goldstein of the New York-Presbyterian Hospital-Cornell Medical Center in 1985. Instead of cutting the scrotal skin, the skin is punctured and the vas delivered with two special instruments. Over 15 millions men have undergone the No-Scalpel Vasectomy procedure worldwide since 1974. It is rapidly becoming the standard vasectomy technique in the United States.



### What's special about the No-Scalpel Vasectomy technique?

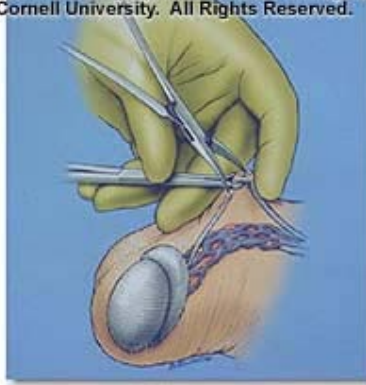
The No-Scalpel Vasectomy starts with a more effective technique to anesthetize the scrotum and vas. Two special instruments are used for this procedure without using a scalpel. It is an elegant technique for delivering the vas deferens through a tiny midline puncture whole, which is dilated, pushing the potential blood vessels and nerves aside instead of cutting across them. Once the vas is delivered, its ends are sealed in the usual fashion.

The entry site usually contracts to approximately 2 to 3 mm in size at the end of the procedure. No sutures are necessary to close the entry site.





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### **What are the benefits of No-Scalpel Vasectomy?**

The benefits of No-Scalpel Vasectomy are:

- Less discomfort.
- Ten times fewer complications than conventional (scalpel) technique.
- No sutures needed.
- 40 to 50% quicker recovery than conventional vasectomy.



## **Indications**

Vasectomy is indicated for any fully informed man who does not want to father any children (or any additional children) and who desires an inexpensive outpatient method of voluntary permanent surgical sterilization.

## **Is No-Scalpel Vasectomy safe?**

Vasectomy in general is safe and simple. Vasectomy is an operation, and all surgery has some risks, such as bleeding, bruising, and infection. However, serious problems rarely happen.



## **Is No-Scalpel Vasectomy Painful?**

No. Since we use a special nerve block anesthetic technique, the No-Scalpel Vasectomy is an almost painless procedure. Before the vasectomy, the doctor may give you a mild sedative to relax you. You may experience mild discomfort when the local anesthesia is administered. However, once it takes effect you should feel no pain. Some men feel a slight “tugging” sensation as the vasa are manipulated.



### **Precautions in No-Scalpel Vasectomy**

- Acceptor is not sterile until 3 months after surgery so a Nirodh (condom) has to be used for 3 month. This is because of the presence of sperms in the vas after surgery. It requires 20 ejaculations to clearer the vas. So a semen analysis (sperm test) has to be done after 3 month to confirm the sterile status of the client.
- Not to do any heavy physical activity for 2 days. This is to give rest to the operated part.



### **Advantages**

- Less pain and bruising & shorter recovery time.
- Reduced operating time

- Quick, Safe and effective
- For doctor – It is more refined procedure minimizing bleeding and tissue trauma
- For client – It is less pain and quick recovery
- For administrator – It is low in cost and provides greater safe productivity.

